

Regarding Ritual Behaviour at Shengavit, Armenia

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Abstract

The Kura-Araxes cultural tradition is reflected in the mountains north, east and west of Mesopotamia from the mid-fourth to mid-third millennia BC. Originating in the Armenian Highlands and its subset the South Caucasus, it developed over that period, and also spread across a wide area of the Taurus and Zagros mountains, down into the Southern Levant, and north beyond the Caucasus Mountains. Despite many decades of excavation of sites relating to this cultural tradition, we know surprisingly little about the societies of the homelands and their relationship to their migrant diaspora. This paper looks at one aspect of those cultures, ritual practice and ideology, to see if it is possible better to define the nature of and changes in Kura-Araxes societies within the homelands, and their possible relationship to migrant communities. The focus of the inquiry is the site of Shengavit in the foothills above the Ararat Plain in Armenia.

Introduction

Archaeology as a field has been in a state of flux regarding theoretical approaches to analysing archaeological remains. This is especially so among different national schools, many of which have been intellectual islands with little interaction and discussion among them of the theoretical approaches they find most appropriate. Of the two authors here Simonyan belongs to a cultural historical school and Rothman to a neo-evolutionary school influenced by new post-processual insights. However, whether one subscribes to new theoretical constructs of culture and culture change represented by historical or structuralist post-processualists,¹ or more traditional definitions typical of the neo-evolutionary school, or culture historians,² represented in the West by Childe,³ the Kura-Araxes cultural tradition provides a rich source of research and theory.

The problem is to find common ground. For our purposes here, there is common ground that can inform the study of ritual at Shengavit and in general. Every school believes that ideology, whether secular, sacred, or both at the same time, reflects the economic, political, and social organisation and dynamics of groups of people who share a common symbolic vocabulary that encodes ideology. All believe that the artefactual remains of ideology are its symbolic representations (see below). Behind these are real individuals and groups of people who use the symbols for

¹ Rothman n.d.; Pauketat 2001.

² Rothman 2004.

³ Childe 1929.

a socially complex variety of purposes.⁴ In practice, individuals create these artefactual symbols, and their meanings are negotiated and determined by their users.

Where this common understanding becomes contentious is in part in defining terms. The culture historical school defines a ‘culture’ or ‘people’ — they are essentially the same — as a common set of artefactual attributes. To Simonyan this means an objective reality of a coherent group of people living in the same place and time. It is the sum of similarity in artefacts by type, manufacture and style, as well as commonalities of organisation and ideology. The greatest problem is defining what traits constitute a particular culture. Neo-evolutionists in their most recent iterations see culture as elements of the shared, learned behaviours (practices) in which identity, organisation, social behaviour (rules and norms), and secular and sacred ideologies are defined.⁵ In the latter school different societies, mostly economic and political units, can share cultural elements — they are not so tightly bounded — and certainly different ethnic groups derived from the same cultural source can be members of different societies and yet share cultural attributes with their homelands. Because culture is a more open-ended, flexible term for neo-evolutionists, the idea of a bounded, homogeneous ‘people’ is replaced with the term population, which must be defined by complex cultural contexts in which defined groups lived together.

Still, whether neo-evolutionist, structural post-processualist, or culture historian (historical processualists do not subscribe to this), members of these schools see culture as the shared mental or cognitive maps of ancient populations in various places and times. These mental maps defined the ancients’ view of the world, both the secular and the sacred, established their identity, and determined how they organised politically, socially, and economically. At another level there were mental maps that provided the ancients with guidelines for how to make houses, pots, or tools and potential styles to incorporate into artefacts as expressions of cultural meanings (style here consists of elements of shape or decoration that go beyond the function or the technical process of manufacture of an artefact). In many ways these shared mental maps are the basis for the Russian culture historical concept of ‘a culture.’ The word ‘corpus’ would be more likely to be used by neo-evolutionists and post-processualists for artifactual culture, but except for its boundedness the concept for the purpose of discussing ritual is not so far apart. Deep differences in interpretation of change arise when speaking of the processes of development, but that is not so important for our discussion here.

This article then focuses on one aspect of those mental maps, ritual, for the Kura-Araxes cultural tradition in a common way. As such, two cultural aspects are at issue: (1) the role of ritual in understanding the organisation and evolution of particular societies within the Kura-Araxes cultural tradition, and (2) ways of defining the similarities and differences (the connections) among different societies within the tradition.

The focus here therefore is ultimately the greater cultural tradition called, alternatively, Kura-Araxes, Early Transcaucasian, Shengavitian, Karaz, Pulur, or Khirbet Kerak. Its geographic focus is the Shengavit mound and related sites as representatives of that tradition.

⁴ Hodder 1986, pp. 63ff.

⁵ Rothman 2004.

We still have a long way to go to understand the Kura-Araxes cultural tradition. Despite decades of excavation, largely by Soviet archaeologists, “we do not have a clear understanding of what the Kura-Araxes actually is ... To date, we know frustratingly little about the social world of Kura-Araxes ... communities.”⁶ Most evidence of this tradition is found in the mountainous regions of the Near East from approximately 3500 to 2450 BC. The Kura-Araxes cultural tradition has been identified by a corpus of handmade, black-burnished pottery often with a contrasting interior surface colour (red is one common example). Looked at in contrast to other cultural traditions in the larger region, this pottery seems to indicate a cultural homogeneity both in the supposed homeland, in the area of modern Armenia, Azerbaijan (Nachiçevan), Georgia, and northeastern Turkey, and among groups of migrants in a huge diaspora extending across the Taurus Mountain front⁷ and southwest into the northern Jordan Valley near the Sea of Galilee,⁸ southeast into the Zagros Mountains around Lake Urmia to the Kangavar Valley,⁹ across the littoral south of the Caspian Sea¹⁰, and north into Daghestan and the North Caucasus (Fig. 1).¹¹

These cultural elements have led many scholars to see these societies as distinct and separate from the groups that surrounded them or among whom they lived. Researchers also have tended to conflate the entire millennium or more that is associated with the Kura-Araxes as if it were one single cultural manifestation. But new evidence raises questions as to whether either assumption is true.¹²

We, the authors of this article, have concluded that, in fact, there is a core of shared identity among Kura-Araxes populations, but also significant variations. Hence, the Kura-Araxes was a cultural tradition shared by those in the homeland and migrants, the latter of whom were in effect ethnic groups in the diaspora. This is clear even if we limit ourselves to pottery style. As Sagona noticed in 1984,¹³ and as others looking at the Kura-Araxes case continue to affirm,¹⁴ “problems of interpretation are further exacerbated by the distinct regional variants of this ‘cultural-historical community’.”¹⁵ Some researchers point to what they believe are contemporaneous differences in style zones within the supposed homeland. For example, for Armenia Badalyan and Smith propose two periods of Kura-Araxes occupation (Early Bronze I and II), but they assert that there were at least three distinct stylistic groupings in pottery.¹⁶ Two of those, Karnut-Shengavit and Shresh-Mokhra Blur, were coterminous according to Badalyan and Smith.¹⁷ These variants they argue represented groups living in different environmental zones. At the same time, petrographic analysis of clays and tempering from far away Beth Yerah (Khirbet

⁶ Smith 2005, pp. 258–260.

⁷ Rothman 2003; Batiuk and Rothman 2005; Sagona 1984, 1994.

⁸ Greenberg *et al.* 2012.

⁹ Rothman 2011.

¹⁰ Fahimi 2006.

¹¹ Kohl 2007.

¹² Frangipane and Palumbi 2007; Sagona 2014.

¹³ Sagona 1984.

¹⁴ Rothman and Kozbe 1997; Palumbi 2008.

¹⁵ Kohl 2007, p. 89.

¹⁶ Smith *et al.* 2009.

¹⁷ Smith *et al.* 2009.

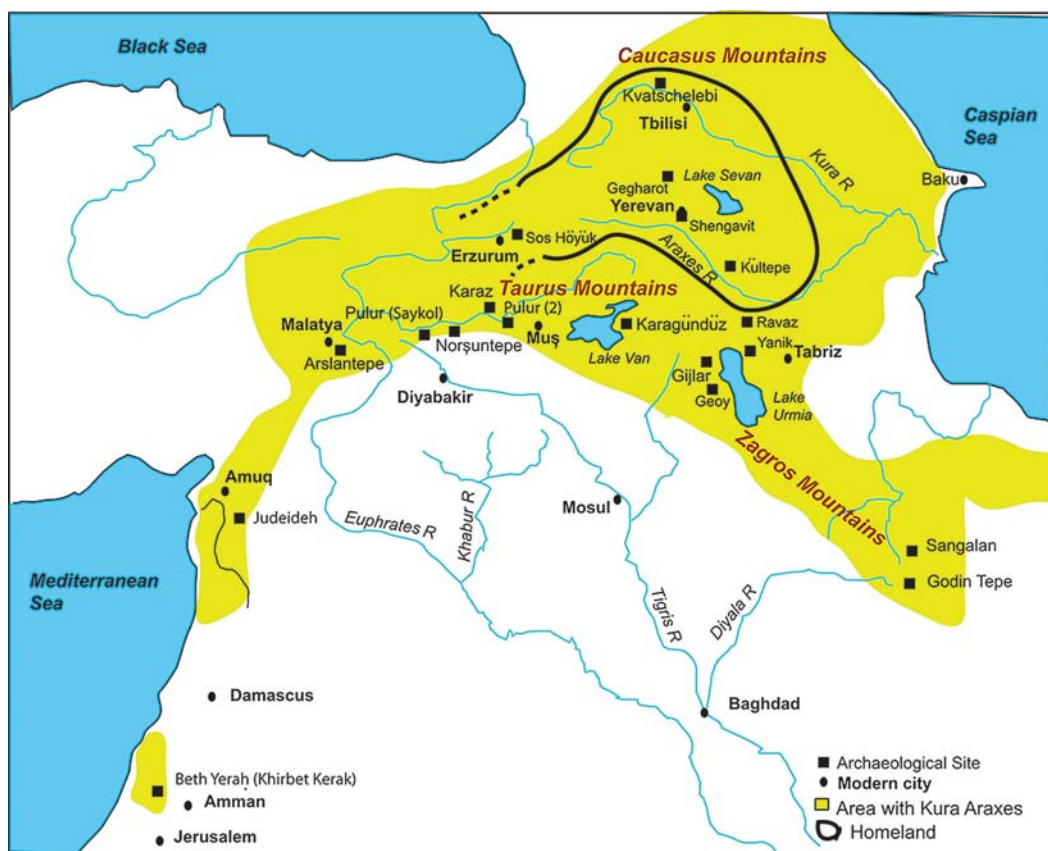


Fig. 1. Distribution map of extent of the Kura Araxes cultural tradition.

Kerak) in the southern Levant, and Kura-Araxes sites of the fourth and third millennia in Armenia,¹⁸ indicate a common tradition of pottery manufacture that spanned hundreds of years and as many kilometres.¹⁹

Still, there is room for considerable debate on the meaning of style. Of the two authors of this paper Simonyan believes that the Kura-Araxes constituted a single socio-economic unit across its entire extent. Such variations as there were are chronological in nature or represented a settlement system with a town centre and peripheral, dependent villages. Rothman, on the other hand, believes that within the Kura-Araxes cultural tradition, which is widely shared, there were nonetheless different societies. This he bases not only on style, but on variations in how groups within the mountain environment and in the Jordan Valley adapted to differing natural and human environments.²⁰

¹⁸ Iserlis 2009; Iserlis *et al.* 2010.

¹⁹ Rothman 2014.

²⁰ Rothman n.d.

The deeper we go into the question of what pottery style can tell us about the nature of Kura-Araxes society (according to Simonyan) or societies (according to Rothman), the more complex it becomes. So, Simonyan and Rothman agree that Kura-Araxes is a cultural tradition with some shared identity. What is clear is that addressing these different theories and understanding the nature of the social relationships that formed Kura-Araxes society(ies), even if there were complete agreement on the meaning of style, will require more than stylistic analysis of pottery. Scholars must begin to probe the mental maps of people of distinct cultural traditions, and variations among societies within that tradition, assuming those variations are meaningful.

Ritual in a Cultural System

Ritual, we argue here, is one mental realm in which we can see variations within the Kura-Araxes cultural tradition and also possible development over time within each of its societal units. Put another way, an analysis of variations in ritual action and symbolism may open another window into the commonalities or differences among different populations within the Kura-Araxes cultural tradition, because ritual is a special form of communication within or between cultures.²¹ Ritual is the re-enactment and therefore the representation of social relationships. In Gell's analysis it is the agent of action.²² Therefore, its "artistic products", often discussed by art historians, put into action ideas about these social relationships, including those with the divine. Further, "artworks ... come in families, lineages, tribes, whole populations, just like people. They have relations with one another as well as with the people who create and circulate them as individual objects. They marry, so to speak, and beget offspring which bear the stamp of their antecedents. Artworks are manifestations of 'culture' as a collective phenomenon; they are, like people, enculturated beings."²³

In the broadest sense, ritual's symbolic systems therefore serve a role within a particular culture as it relates to other aspects of that culture. Ritual can itself be part of the economic and political adaptation of a culture.²⁴ In part this is because ritual "was the mechanism that integrated the individuals of the community across household and kin ties, and it provided long-term stability."²⁵ Ritual also models economic activities like hunting or agriculture, and certainly in ancient societies becomes the focus of pleas for fertility. If, as we will propose, the economic, social, and political organisation of sites like Shengavit changed over the span of 500 or more years, we should see ritual change as well.

So, what is ritual and why should it be such an important factor in explaining the two inter-related problems cited above, content and comparison? Ritual is the physical acting out of a shared cognitive view of how the world works, often, but not exclusively, in relation to the divine (religion). In that ritual process aspects of culture are reflected, as are peoples' appropriate roles within a culture's organisation. Ritual uses a variety of symbols as artwork, including the special

²¹ Sosis 2004.

²² Gell 1998.

²³ Gell 1998, p. 153.

²⁴ Sosis 2004.

²⁵ Gilman and Stone 2013, p. 609.

place in which the ritual takes place. Eliade calls these ritual places “irruptions of the sacred in the secular world.”²⁶ They can be specialised buildings like churches, synagogues, mosques, temples or shrines, or sacred spaces like meeting places in the woods for covens, or ritual areas within a home or other building whose primary function is otherwise not ritualistic; chapels within modern institutions like hospitals or universities are another example. Even prayer rugs and ritual circles for individual worship are sacred spaces in this sense. In Armenia, an interesting case of ritual places are high mountain cultic locations where thousands of rock drawings were carved and where cases of initiation were performed, vestiges of which have been preserved up to the present time in the national feast called Vardavar. Therefore, spatially, religious ritual “imbues space with meaning, thus transforming it from mere locale to socially important space.”²⁷ The same can be said about civic ritual spaces like city halls, the steps of Congress where presidents are inaugurated, tribal communal halls or *mudhifs* in Iraq, or Westminster Abbey where English kings are crowned, combining religious and civic ritual.

Ritual practice tends to reflect the population that shares it. The more specialised, formal religious buildings tend to occur in societies with greater occupational specialisation and political centralisation. Representing Great (as opposed to folk or Small) Tradition religions,²⁸ these more formal, centralised religions also tend to have specialised priesthoods. To fund and operate specialised religious buildings, presumably with formally trained priests, requires an ability to organise the community as a whole, to collect needed resources for building and maintaining ritual spaces, and to train and provide for specialised priests. Rarely is there ethnographic evidence of formal religious buildings and full-time priests in kinship-organised societies or simple chiefdoms. Shamans, sorcerers, or practitioners of an earlier Small Tradition religion were not considered to have a specialised occupation; they had to provide for their own subsistence like any other member of society. They acted as intermediaries to the divine world, on an individual basis or episodically for the group, by manipulating commonly understood symbols and rituals as mechanisms to gain mystical power.²⁹

Ritual can be practised by an individual or by a congregation. We today are most familiar with congregational worship, yet a shrine or ritual space can be a central place for a larger population. A cemetery, for example, is a collection of individual dead or the dead of a family. Often it contains a small shrine. The living will visit a cemetery individually to communicate with or perform rites to honor their dead. Yet, cemeteries also are often a place for communal worship to commemorate larger communal events. Their layout and markers at the same time reflect a common community perception of shared ideas about the way the world of the living works. For example, different cemeteries distinguish among different religions or ethnic groups. Modern and ancient cemeteries often reflect differences in status in more complex societies.

In ritual, participants carry out repeated sequences of different combinations of dance, song, verbal expressions, gestures, displays of symbols, or actions (including sacrifice). These acts often serve to call on supernatural entities or forces, on behalf of the congregation, to bless them

²⁶ Eliade 1958.

²⁷ Gilman and Stone 2013, p. 610.

²⁸ Redfield 1971.

²⁹ Romain 2009.

and also to affirm the social order reflected in the ritual and its accompanying narratives (myths). The rituals can be commemorative, as Christmas is, or they can be transformational, as in a rite of passage;³⁰ for example, the coronation of a king or puberty rituals.³¹ The performance of the ritual on one level affirms the shared understanding of the participants and their loyalty to the group. "Certain fixed offices in tribal [and more complex] societies have many sacred attributes; indeed every social position has some sacred characteristics. But this sacred component is acquired by the incumbents of positions during the *rites de passage*, through which they changed positions."³² Think of presidents of the United States, who swear to fulfill their secular role on a Bible, and then invoke the divine, ending every speech, "God Bless America." Such use of religion and ritual to legitimise secular power is a common practice in state societies. Anthropologists call this "sanctification".³³ In less complex societies, positions tend to be less formally defined:

there are here two ... "models" for interrelatedness ... The first is of society as a structured, differentiated, and often hierarchical system of politico-legal-economic positions ... The second ... is of society as an unstructured or rudimentarily and relatively undifferentiated *comitatus*, community, or even communion of equal individuals ...³⁴

Most anthropologists would not call the latter "unstructured", but rather societies built on kinship or communal relationships of various kinds.

Rituals can also mediate the relations between human populations and the natural environment. Nature is often invested with sacred characteristics, and the social and economic structures of a society are reflected in rituals concerning natural cycles.³⁵ Ritual's symbols often recall either elements of the natural world that are important to a group, or the divine character of natural forces; for example, the ancient Greeks saw their gods as reflections of the fickleness of the natural world, especially in regard to economic needs (agriculture and uses of the seas). In many societies, like that of the Trobriand Islanders,³⁶ what we in the West would consider economic activities, such as making a boat or planting crops, the people consider religious rituals.

In general, therefore, as Victor Turner, an ethnographic interpreter of ritual and symbols, writes,

I found that I could not analyze ritual symbols without studying them in a time series in relation to other "events," for the symbols are essentially involved in social processes. I came to see performances of ritual as distinct phases in the social processes whereby groups became adjusted to internal changes and adapted to their external environment.³⁷

The foregoing indicates that ritual is a good representation of a culture's mental map of the divine role in the world, but it also reflects the rightness of the "secular" structure of social, economic, and political relationships, as well as the integration and the shared civic traditions of a human population within a particular cultural system in a specific time and place.

³⁰ Van Gennep 1960.

³¹ Turner 1978.

³² Turner 1969, pp. 96–97.

³³ Webster 1976; Netting 1978.

³⁴ Turner 1969, p. 96.

³⁵ Rappaport 1968; Moore 1957.

³⁶ Malinowski 1961.

³⁷ Turner 1967, p. 20.

Symbol systems that are an inherent part of the ritual process are key actors; Geertz calls religion “a system of cultural symbols.”³⁸ In many ways, “it is this ritual transformation of the material that empowers the image [symbol] to speak, or to see, or to act, through various culturally-subscribed channels, after which it may be said to exercise its own agency.”³⁹ Agency here, based on Gell’s theories,⁴⁰ is not so much human intention,⁴¹ which many archaeologists now believe is a key to understanding human social structures and change; rather, it is an ability of “art” to generate action and define social relationships. Winter suggests that as important as the concept of “agency” is that of “affect”, the way the agent’s action is received by the observer:⁴² “Affect is located *in* and so comes *from* the work, the result of properties that then impact upon the viewer/user.”⁴³

Ritual, whether we classify it as secular or sacred (or both at the same time), is a key mental map for ancient populations. It integrates their societies, establishes the nature of social (and political) relations, mediates a group’s economic adaptation to its natural environment, and confirms its common identity. Further, it is possible to study ritual using archaeological remains, even prehistoric ones.⁴⁴

The Shengavit Mound and the Kura-Araxes Cultural Tradition

What, then, can we learn from rituals and their related symbols? Our focus will be Shengavit, but also other sites within the Kura-Araxes cultural tradition.

The site of Shengavit is situated in the capital of the modern Republic of Armenia, Yerevan, in the foothills between the Kotayq plateau and the Ararat Plain on the left bank of the Hrazhdan River (in recent times dammed for Lake Yerevan). The site’s deposits sit on a bluff 30 m above the river. It is a well-known site of the Early Bronze Age.

The region in which Shengavit is located, the Ararat Plain and adjoining foothills, is at one of the lowest elevations in the Armenian Highlands. As opposed to the narrow mountain valleys further north, the Ararat Valley is an open plain, hot in the summers and snowy in the winters. In the rolling hills at nearby Mushakan, wild grapes, pomegranates, figs, pears, and apples still grow, as do the wild precursors of domesticated wheat and barley. Farmers can practise rainfall agriculture in the foothills,⁴⁵ but there is also evidence of a strategy to intensify production through building of irrigation pools and canals to divert water from the Aragats and Geghema Mountains to the Ararat Plain.⁴⁶ At Mokhra Blur Areshian discovered an artificial mud-brick dam on the Kassakh River, where enough water pooled behind the dam to irrigate up to 45 ha of arable land.⁴⁷

³⁸ Geertz 1973.

³⁹ Winter 2007, p. 44.

⁴⁰ Gell 1998.

⁴¹ Gardiner 2008.

⁴² Winter 2007, p. 44.

⁴³ Irene Winter, personal communication (e-mail).

⁴⁴ Fogelin 2007.

⁴⁵ History of the Ancient Orient 1983, p. 5.

⁴⁶ Kushnareva 1997, p. 183.

⁴⁷ Kalantar 1994, p33-35.

At Metsamor, a metal-working site of the Kura-Araxes tradition,⁴⁸ carvings of pools and irrigation canals are preserved.⁴⁹ Documents suggest that later Urartian, Persian, and medieval kings also built canals to irrigate the Ararat Valley, without which reliable and sufficient yields would not have been possible. Wild sheep, goats, boar, and chamois still roam the hillsides in Armenia. At Shengavit, our team has recovered a wide variety of animal bones, presumably evidence of consumption. These include the bones of fish that traditionally live in deep rivers or lakes,⁵⁰ which suggests either that the Hrazhdan was deeper at one time, or perhaps that the residents created artificial pools for aquaculture.⁵¹ Pasturelands for sheep and goats, the most common of the faunal remains,⁵² as well as for cattle and far less commonly pigs, birds and wild deer were also readily available. Excavations also retrieved remains of equids, whether domesticated or not, including onager and perhaps true horse.⁵³ Hovsepyan notes the limited kinds of plants grown by Kura-Araxes societies; barley and wheat were the most common of those crops by far.⁵⁴ The presence of a number of vats and grape remains suggests that winemaking was another local activity. Analysis of a *karas*, or large storage jar, buried in the floor of round building 3 in square K6 was inconclusive as to whether it contained grape wine. It may have contained resonated spirits.⁵⁵

The placement of Shengavit within the Kura-Araxes time span depends on how one defines that period, the beginning and end of which are much debated. Some see two periods within a range from 3500 to 2500 BC.⁵⁶ Others believe that the tradition began somewhat later and continued into the second millennium BC (see Fig. 2).⁵⁷ Yet others want to use the Chalcolithic, Early and Middle Bronze nomenclature, which is so confused that region to region the same terms are applied to completely different time spans.⁵⁸ Avetisyan and Bobokhyan consider the necropolis at Shengavit to belong to the Bedeni period.⁵⁹ Simonyan believes instead that the necropolis is contemporary with the top layer of M5 in the 26th century BC,⁶⁰ as we found a combed jar with burnish at the shoulder, which some see as a transitional form into the next named phase among the latest M5 materials (Fig. 14, 24015/24159/1). The end of Shengavit as a Kura-Araxes site is reasonably clear. The last Kura-Araxes date from M5 is 2450 BC cal. After the end of the Kura-Araxes tradition, people used the mound episodically for another 100 years or more. Simonyan believes

⁴⁸ Burney and Lang 1971, pp. 68, 73.

⁴⁹ Simonyan 2013a, pp. 39–41.

⁵⁰ Nyree Manoukian, preliminary report.

⁵¹ Simonyan 2013b.

⁵² Crabtree, personal communication and preliminary report.

⁵³ There is considerable debate over whether true horse existed at Shengavit or not. Yeseyan (1969) argues for it during the Kura-Araxes, but Hans-Peter Uerpmann and Pamela Crabtree, our team ethnozoologist, (personal communication) suggest that there was not evidence of true horse from secure provenances. The issue is about what is measured. Since the late 1980s research suggests that post-cranial characteristics cannot be used for discovering true horse (Anthony 2007 p. 163f.), although many analysts used those very measurements.

⁵⁴ Hovsepyan 2011; Simonyan questions this conclusion based on other research.

⁵⁵ Chemical analysis of spalls from the bottom of the pot by Patrick McGovern of the University of Pennsylvania Museum did not find tartaric acid common to grape wine, although some remains of resonated liquid, perhaps an alcoholic blend from pine resins might be reflected there.

⁵⁶ Smith *et al.* 2009.

⁵⁷ Sagona 2000.

⁵⁸ Rothman and Fuensanta 2003.

⁵⁹ Avetisyan and Bobokhyan 2007.

⁶⁰ Simonyan 2013b, p. 41.

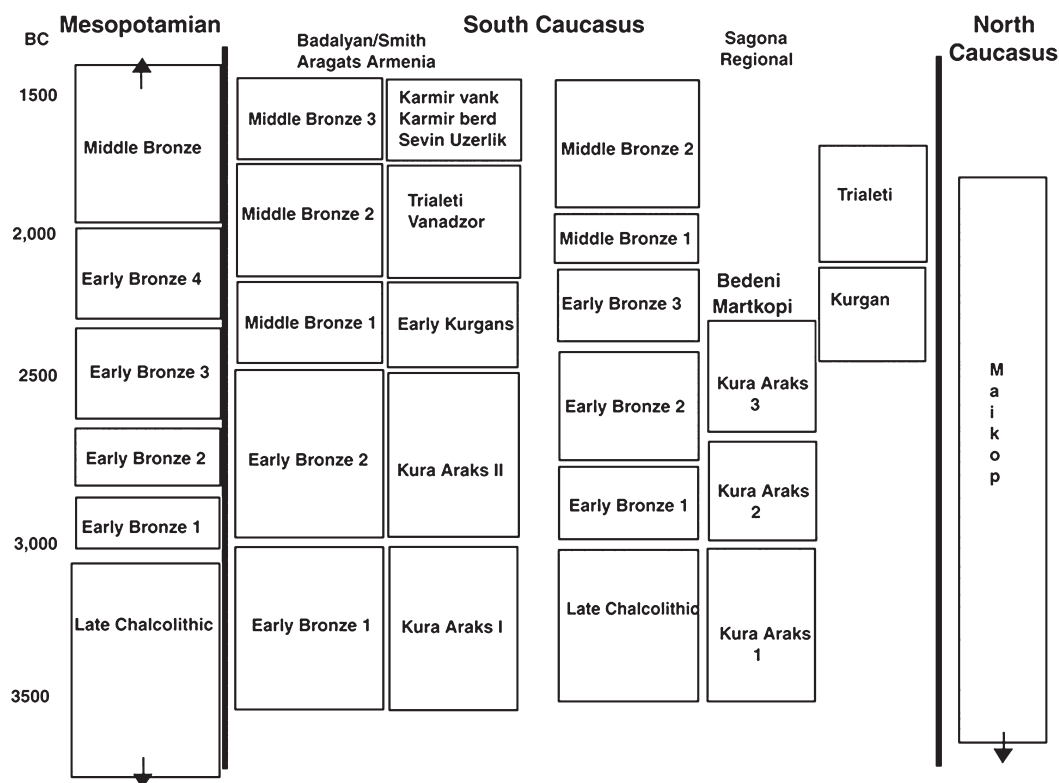
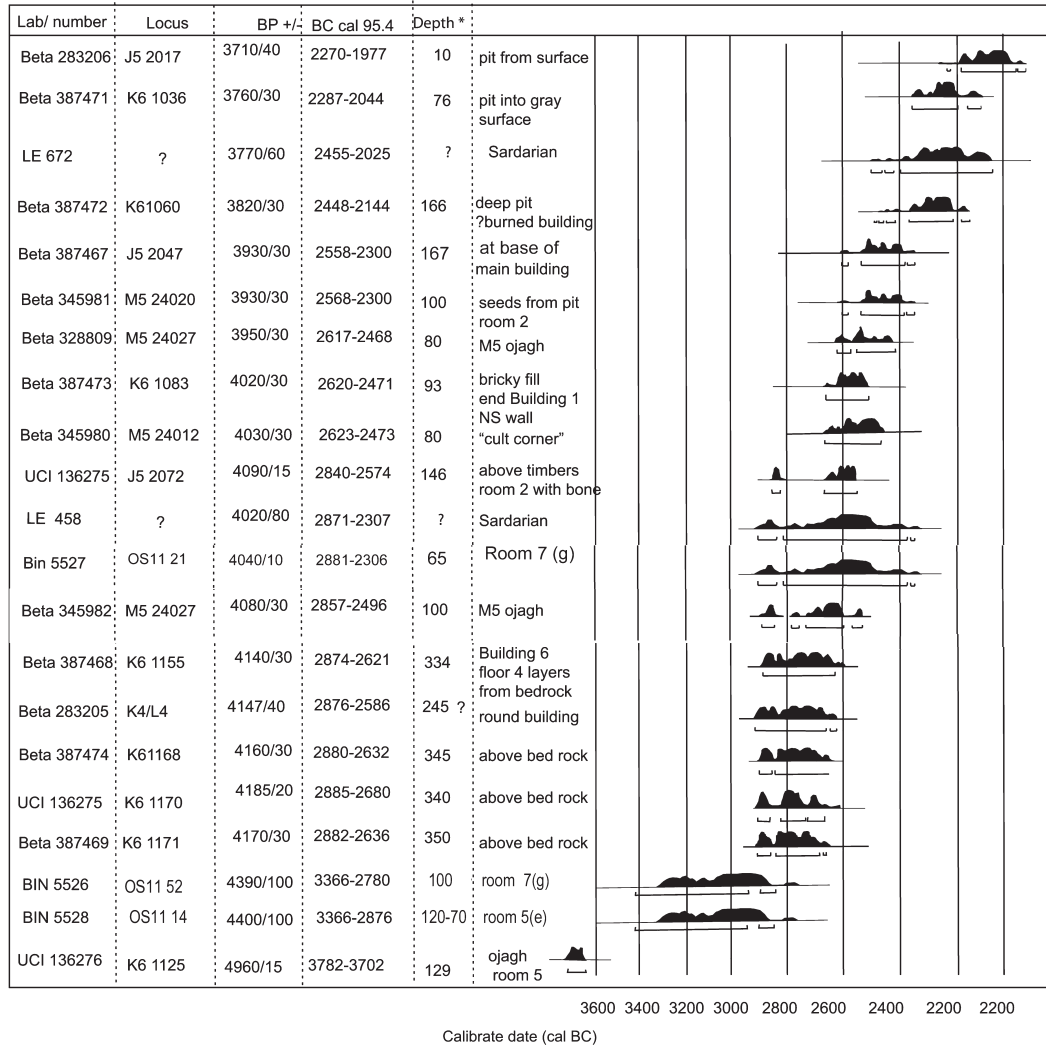


Fig. 2. Chronological schemes for the Kura-Araxes (Rothman 2011, table 5.1).

that modern residents in Soviet times removed all traces of the latest, post Kura-Araxes stratum, based in part on old pictures of the site and the presence of a modern pipe that runs across the northern edge. When Shengavit actually began is a matter of dispute between the authors here. Simonyan believes that the site was founded before 3300 BC in the Kura-Araxes I (for related sites in the Taurus Mountains like Arslantepe and Zagros Mountain sites like Godin Tepe the Late Chalcolithic or LC4-5). This he bases on three radiocarbon dates from L6 and N10/O10/11 (BIN dates), on his view of the pottery seriation, and on a female figurine typical of the fourth millennium. Rothman believes that the site was founded after 2900. He argues that like the date from the K6 *ojagh* (Table 1) the two early BIN dates were probably contaminated. He argues first that the elevation of the BIN dates is well above bedrock. The three radiocarbon dates from very secure provenances just above the bedrock all post-date 2900 BC cal (BETA 38747, UCI 136275, and BETA 387474).⁶¹ There is no indication from K6, the one complete section from top to bottom, that some kind of inverted stratigraphy existed. Therefore, samples from much higher on the mound

⁶¹ Thanks to the National Geographic Committee on Research, the White Levy Foundation, and Gregory Areshian for funds to run these radiocarbon dates.

Oxcal v. 4.2.3 Bronk Ramsey (2013) McCall 3 Atmospheric curve



* because different datums were used in 2000-2008 and 2009/12 the depth has been regularized to below surface.

Table 1. Calibrated Radiocarbon dates from good contexts at Shengavit.

are unlikely to be earlier than lower ones. The determining factor will be the pottery analysis, which is still on-going. Simonyan, who was a key excavator at Mokhra Blur and knows that pottery well, asserts that the pottery from levels V-IX of that site, nearby but on the Ararat Plain proper, parallels Shengavit throughout its occupation. Smith and Badalyan see a major difference.⁶² Rothman, after collecting data on all the pottery from good provenance in K6, I14, M5, L7, K/L3, and K/L4

⁶² Smith *et al.* 2009.

and then inspecting pottery from Mokhra Blur is not so certain. Mokhra Blur is in any case problematic, as a full analysis has not been published, in part because of a fire in its storerooms, so questions remain about its stratigraphy and dating. At Gegharot⁶³ pottery that clearly belongs in the 4th millennium BC is missing from Shengavit, according to Rothman.⁶⁴ The painted potsherds from the 2000-2008 seasons look to Rothman on first inspection to be Ninevite V based on fabric and manufacture; that is, post 3000 BC. The most prototypical Shengavit type, vessels with a double carination (see Fig. 14/2), when it occurs elsewhere such as at Godin Tepe,⁶⁵ are from 3rd millennium BC levels as well.⁶⁶ So, at the moment, the dating can be argued either way. Hopefully, as all the data is collected and notebooks reviewed, we can reach some agreement.

Most Kura-Araxes sites are multi-period mounds; some like Aygevan in the Ararat plain, Sangalan near Hamadan, Yanik Tepe, and Gijlar Tepe⁶⁷ near Lake Urmia encompass over 10 m of Kura-Araxes occupation. We now know that Shengavit's deposits are consistently 3.5 m deep, based on excavations to bedrock in square K6 and a geo-radar study. Because of the building of a Soviet-era hospital, an orchard (since reclaimed), and a gas station on the mound proper, the remains of what can be excavated are perhaps 40 per cent of the whole 6 ha. This calculation does not include what must have been a large necropolis around the southwestern part of the mound, which could indicate the possibility of some residential occupation outside of the wall as well. A small salt mine was also obliterated by a road on the shore of Lake Yerevan opposite the site. An article from an 1888 newspaper and testimony of A. Mkrtchyan, former director of the Institute of Physics of the Armenian Academy of Sciences, assert that the mine was used from antiquity to 1960.

Shengavit has been excavated since the 1930s. From 1936 to 1938 Bayburtian led the project,⁶⁸ then Sardaryan dug there on and off from 1958 to 1983.⁶⁹ From 2000 up until now, an expedition of the Scientific Research Centre of the Historical-Cultural Heritage, under the direction of Hakob Simonyan, has continued the excavations of the site.⁷⁰ Since 2008, new investigations at Shengavit have been conducted within the framework of the Target Investigation Program of the Scientific Committee of the Republic of Armenia. From 2009 to 2012, an Armenian-American joint expedition, co-directed by the authors, Hakob Simonyan and Mitchell Rothman, continued archaeological excavations at Shengavit (Fig. 3). Extensive artefact holdings from the site are housed at the National History Museum, the Erebuni Museum, and the laboratory of the Scientific Research Centre of the Historical-Cultural Heritage.⁷¹ We intend over the next few years to create an open source web archive (that is, anyone can access and download material) of all

⁶³ Thanks to Ruben Badalyan for showing MSR the Gegharot collection stored at the Municipal Museum in Yerevan, and to Armine Hayrapetyan for showing MSR the Mokhra Blur material at Yerevan State University.

⁶⁴ Simonyan questions the Gegharot stratigraphy.

⁶⁵ Rothman 2011, fig. 5.59.

⁶⁶ See also Smith 2009.

⁶⁷ Kohl 2007; T. Cuyler Young, personal communication about Sangalan, now destroyed.

⁶⁸ Barburtian 1939, 2011.

⁶⁹ Sardarian 1967, 2004.

⁷⁰ Simonian 2002; Simonyan 2011. Hakob Simonyan's name (his preference is Simonyan) has been transliterated in different ways. These references represent how they were transliterated in the particular article.

⁷¹ Ruben Badalyan is scheduled to finish a description of the Shengavit material at the National History Museum for publication in 2014.

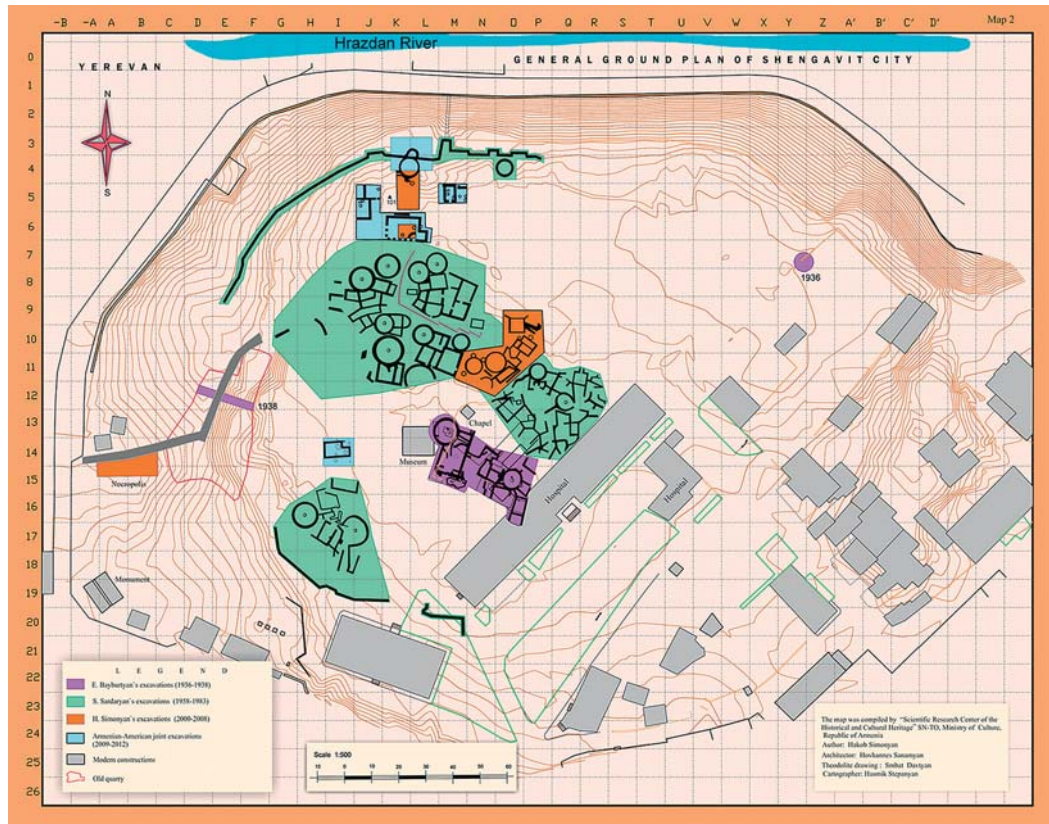


Fig. 3. Topographic map of the Shengavit site with the areas in which various teams worked.

artefacts, catalogues, field notes, databases, pictures, and bibliography, as well as a book that reviews the artefactual history of the mound.

Our research and a review of such earlier records as we could find shows that the site was very tightly packed, with the foundation of one level built immediately on the top of the remains of the walls of the level below (Fig. 4a and b). In square K6, the bottommost layers are a series of four re-buildings of a round house on the same plan (Fig. 4a). The bricks in each re-building phase are different, indicating some passage of time. On top of that building was a square building (building 5, Fig. 4b) that burned. The *ojagh* of K6 was in a small anteroom probably associated with this building. Residents then built a much sturdier round building (building 3) on top of the remains of the fire. This building is contemporaneous with the square building 2. All of this area extending into squares K5 and J5 was then sealed by a very hard grey surface with pits filled with ash and bone, often resurfaced. On top of that surface residents constructed the final building 1, which sat only a few centimeters under the current surface. From square K6, in which we reached bedrock, therefore seven or eight separate strata were present from the surface to the sterile stone conglomerate over solid bedrock, depending on whether one counts the gray layer as a separate level.

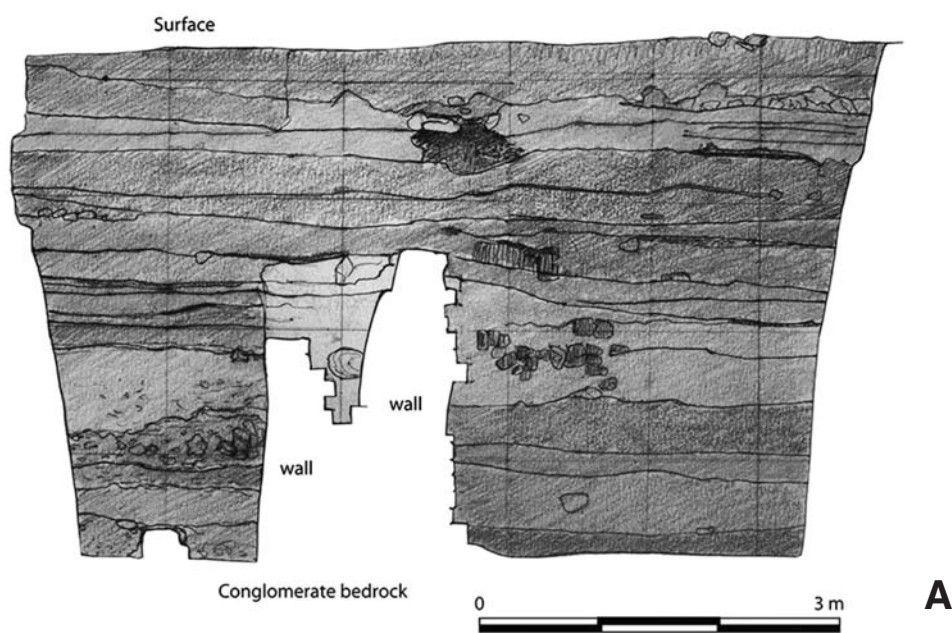


Fig. 4 a. The section and architecture of Shengavit Square K6.

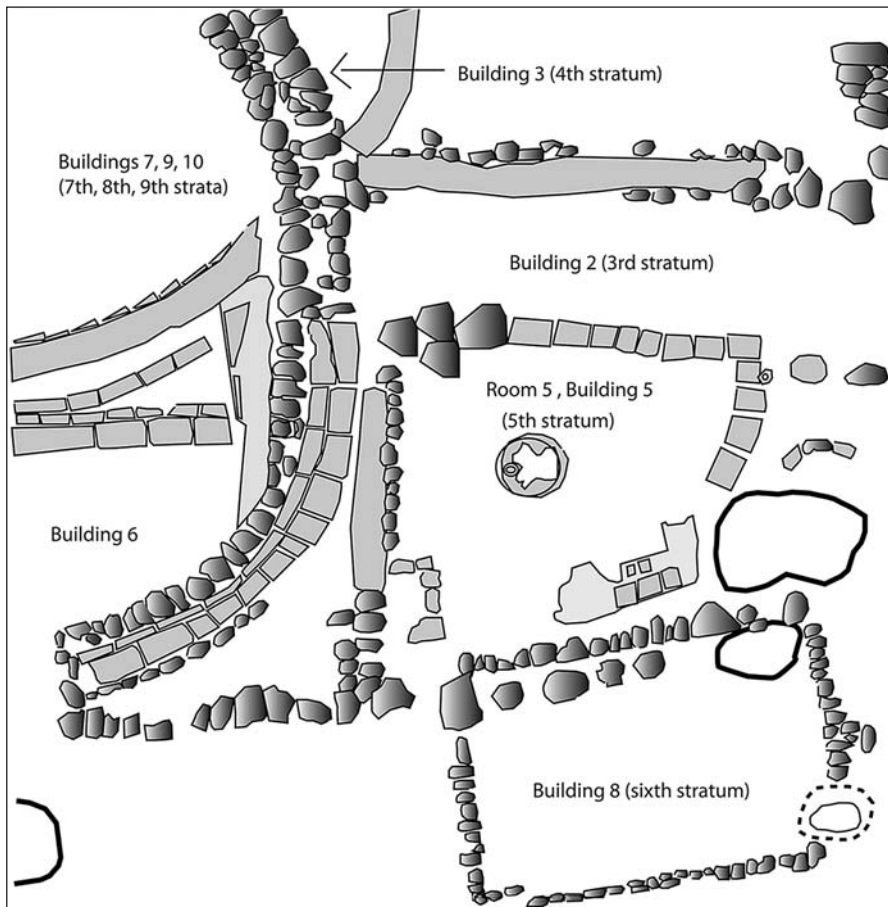


Fig. 4 b. The section and architecture of Shengavit Square K6.

Within these architectural levels we found three phases of architectural style (Fig. 5). The earliest was a small round building from 5 to 7 m in diameter, often with a single course of mudbrick reinforced at the base. Later on, this earlier building type was replaced by a square or larger, round building, most often with adjoining square or rectangular rooms. The walls in the main room of these buildings tended to be sturdier than the earlier building types, with two or more courses of brick and stone foundations. At the very end of the Kura-Araxes occupation of the mound, a new architectural plan emerged, now 14 × 7 m in dimension and often with a small alcove off to one of the short sides.⁷² These buildings had two or three courses of brick, pebbled floors, and interior room dividers. Parenthetically, the lowest buildings in K6, built above the conglomerate bedrock, and in O12/P12 did not have the stone foundations normally associated with Kura-Araxes architecture.

⁷² Simonyan 2013b, fig. 21.

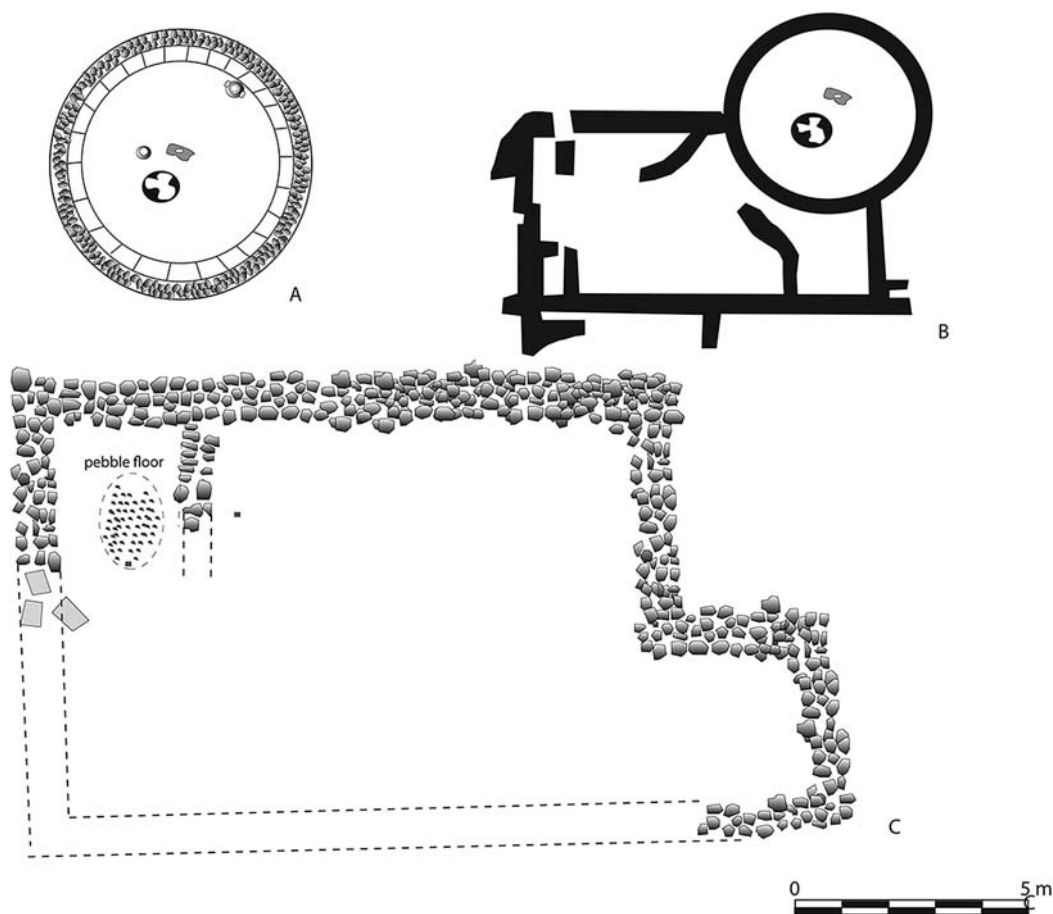


Fig. 5. Architectural phases of Shengavit.

In general, the structures of the Kura-Araxes tradition had one or two rooms, the second being more of an alcove, perhaps a storeroom (Fig. 6). At Kvatskhelebi, the front room was wattle-and-daub construction rather than mud brick.⁷³ Although some buildings had domed roofs (called *hazarashen* in Armenian), most were roofed using a centre pole or two, and the roofing material was a fine matrix of crisscrossed twigs and thick mud plaster, based on collapsed roofing material we found in square K6.

Although there are many different forms of houses, within each of the seven or eight strata, residents appear to build the same house form.⁷⁴ We have to make this conclusion based only on Simonyan and Rothman's work from 2000-2012, because there is no way to determine the

⁷³ Sagona 1984, p. 36; Palumbi 2008, fig. 5.12.

⁷⁴ Simonian 2002

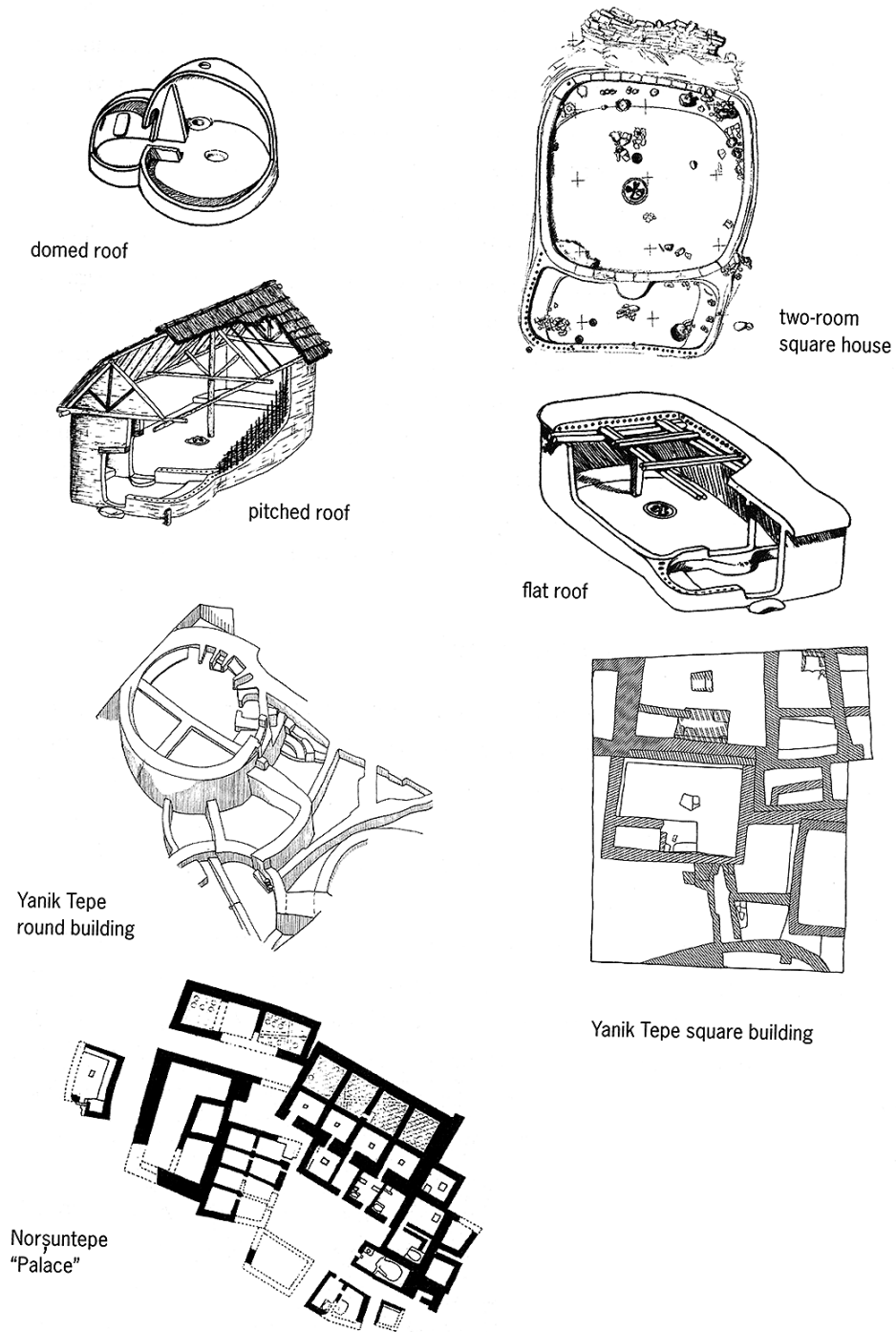


Fig. 6. Kura Araxes Houses (Rothman 2011, fig. 5.13).

stratigraphy of Sardaryan's excavations. Pending our final analysis of the contents of buildings, preliminarily we see none without a domestic use, although other uses may also have existed.

The interpretation of the place of Shengavit in its local area and in the wider region remains one of the key questions to resolve. Until we can complete our analysis, preliminarily, the two authors here agree on some aspects of this question, and disagree on others.

We both agree that Shengavit was a centre. Relative to other Kura-Araxes sites, six hectares is quite substantial. We both agree that it was during the third millennium BC, parenthetically the time of most out-migration, that the site probably played its most important role. Simonyan believes that the site expanded then, while Rothman believes it was founded then. We both agree that the mining and wider distribution of salt, an important mineral for both humans and animals, may have created a much more geographically extensive network for contact and exchange within the broader region. Nearby the site were other smaller, unwallled Kura-Araxes mounds (Fig. 7) and some grave sites.⁷⁵ Further, other small Kura-Araxes sites within the urban area of Yerevan are known to have been destroyed,⁷⁶ and there could easily have been more that archaeologists will never know about due to city construction. All of this certainly validates the possibility that Shengavit was a local centre.

The issue is what the nature of that centre was. Here Simonyan sees it as part of a hierarchical system of control, as Areshian proposes for the Kura-Araxes Ararat sites.⁷⁷ Simonyan postulates that this relationship extended over a wide area beyond the Ararat area with high level control mechanisms and social stratification. Since in his theoretical view, the Kura-Araxes, sharing key attributes, was one socio-cultural unit, Shengavit was a centre for even far-away sites, hence the idea mentioned above of a centre-periphery political structure. The basis of its control was military and also based on craft production, especially in metals.⁷⁸ He suggests that finds of probable weight stones imply a system of weights and standards and with that political control. He further proposes that the site was very dense with over 5000 occupants.⁷⁹

Rothman has a somewhat different view. He argues that the use of site size hierarchies in settlement data as a direct indicator of stratification, whether in the case of Simonyan or Areshian, is difficult. The basis of that theory, championed by Wright and Johnson in the 1970s,⁸⁰ is that sites have different functions. These functions, including control functions, are spread throughout space. The centre, having unique functions that integrate a particular polity, will tend to attract population and thus grow in size, specialisation, often storage capacity, and the kinds of functions needed within the societal system. Therefore, size is not necessarily to be equated with control. Fifth to 4th millennium BC Tepe Gawra in northeastern Iraq was certainly a small centre, although it never exceeded one-and-a-half hectares in size.⁸¹ Scholars have to show which activities were centralised and which were lacking in satellite sites. Even if one could apply site size hierarchies,

⁷⁵ These Simonyan visited, but they have not been published.

⁷⁶ Simonian 2002.

⁷⁷ Areshian 2007.

⁷⁸ Simonian 2011.

⁷⁹ Simonyan asserts that the houses were tightly packed. He calculates that there were 16 rooms for every 1000 m². Extrapolating out there were 900-1000 rooms in the 6 ha. If half were houses and there were 10-12 people per household (Masson 2000), a density comparable to Yerkiov, there would be in excess of 5000 people at Shengavit's height.

⁸⁰ Wright and Johnson 1975.

⁸¹ Rothman 2002.

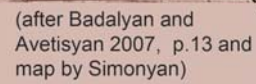


Fig. 7. Distribution of Kura-Araxes sites in Armenia (after Badalyan and Avetisyan 2007, and Simonyan).

nothing indicates more than a two-tiered one around Shengavit. Based on geo-radar survey, the housing seems to have been more dispersed than Simonyan's conclusion warrants. An estimate in population based on long-researched demographic models of population density,⁸² according to Rothman and Bayburtian,⁸³ the population would not exceed 800 people.

What would be the centralised activities or functions that would indicate specialisation? To Rothman, at this the stage of analysis Shengavit looks like a large agricultural town. The literally hundreds of flint sickles archaeologists recovered from the site indicate that agriculture was one of the primary functions of residents of the town. According to Dan Rahimi, our lithics analyst, these sickles were not made at the site,⁸⁴ and most obsidian tools were flake tools from nodules of obsidian found in the Hradzdan River, requiring little expertise to make. According to him, only the fine obsidian points among the stone (and bone) tools required a specialist's touch. Simonyan has argued for specialist potters. Further analysis should resolve this question, but to Rothman the pottery seems rather un-standardised. Very preliminary results of a petrographic analysis of three functional classes of Shengavit pottery from square K6 suggest again wide variation in tempering techniques.⁸⁵ This pattern would imply, in Rothman's opinion, that each household fabricated the handmade wares. Simonyan recovered an area with considerable remains of smelted copper.⁸⁶ He believes that this was specialised, perhaps even guild organised. However, Rothman points out that from the 2000-2012 seasons, when careful stratigraphic recovery techniques were used, excavators found surprisingly few metal artefacts, many of which were decorative in nature.⁸⁷ We did recover a mould for long pins or maybe spear points. Another mould is on display in the on-site Shengavit Museum for axes, which Simonyan cites, but Sardarian seems to have brought material there from many sites, making provenance uncertain. The burials, mostly excavated by Sardarian, were often collective ones (see below), although Simonyan recovered some individual graves with objects made from fine exotic materials, among them gold ornaments.⁸⁸ Sardarian wrote, "with each burial they would place [. . .] bronze weapons, beads of various stones (carnelian, jaspers, and others), symbols of power — stone maces, gold and silver adornments."⁸⁹ Simonyan sees this as symbols of social stratification, but Rothman asks whether the tombs are dated and what are the comparable lower-status graves?

The two authors agree that two functions may indicate a centralised organisation at the site. In the north area — seemingly dominated by farmers based on the number of sickles and other food processing tools (grinders, pounders, harrows, etc.) — we found very large, at times 3.5 m deep, lined pits, sealed with tufa covers, from which we recovered barley and wheat seeds. Based on estimates by Simonyan,⁹⁰ the larger pits contained up to four tons of grain. If the population were closer to Rothman's estimate, this could have been more than the residents of the site would have needed to consume at any given time. The surplus must have represented either central stores for future use, or food that could be shared by residents of other, nearby sites.

⁸² Schacht 1981.

⁸³ Bayburtian 2011.

⁸⁴ Preliminary report and personal communication.

⁸⁵ Nyree Manoukian, personal communication.

⁸⁶ Simonian 2002.

⁸⁷ Simonyan 2013b, plates 12 and 14.

⁸⁸ Simonyan 2008.

⁸⁹ Sardarian 1967, p. 180, fig. 45.

⁹⁰ Simonian 2002.

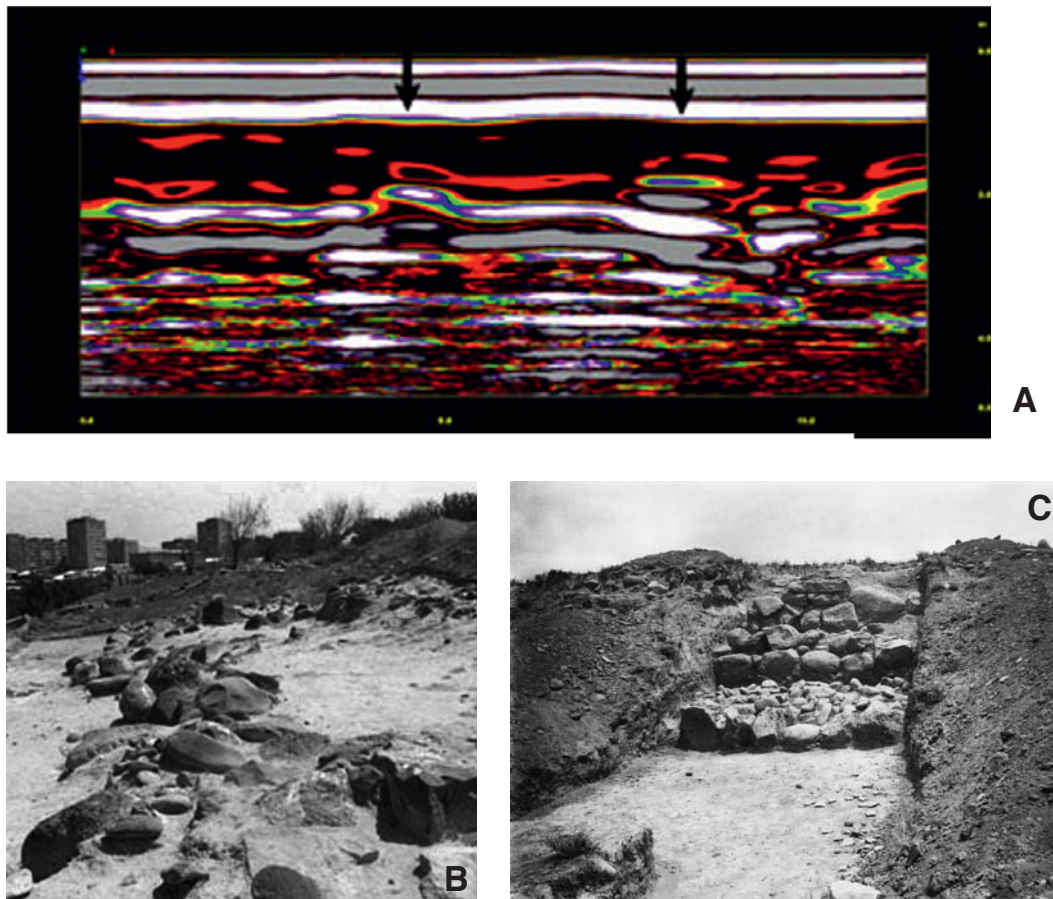


Fig. 8. Images of georadar and photograph of Shengavit's town wall A Geo-radar image from Arkady Karakhanyan and Raffie Durgaryan, B photograph (M. Rothman), C. Baybutian 2011, pl. 9.

The other seemingly coordinated activity was construction of a massive wall (Fig. 8). This wall was 4 m wide with large, rough basalt blocks on the inside and outside, and various smaller stones in the interior. At the moment we believe that the wall was built after 2600 BC, toward the end of the second architectural phase. All the stone on the mound had to be dragged to the site. Some have questioned whether the wall was Kura-Araxes and others whether it was only a retaining wall for the river side.⁹¹ Neither assertion makes much sense. After the Kura-Araxes occupation, there is nothing that indicates a major Middle Bronze town, and then there were 20th-century small barracks. The 20th-century resident would not have needed such crude material when they had concrete and tufa blocks; Middle Bronze occupants did not have a settlement that would have justified the kind of effort needed for such a large-scale project. In addition, the wall turns south to an area away from the river (see Fig. 3) with a small tower, and a subterranean tunnel was built

⁹¹ Kohl 2007, p. 90; anonymous outside reviewers.

through the wall to the river. Both these elements suggest a defensive purpose. Nor was there enough of a threat of erosion to justify this as merely a retaining wall on the high northern slope. The question of whom the population would have been defending itself against remains moot, although unnamed enemies created the need for walls from the early fourth millennium BC in Mesopotamia,⁹² and a similar wall existed not so far from Shengavit at Ravaz (Köhne Shahar), north of Lake Urmia, as did a mudbrick wall at Mokhra Blur and Persi in the Ararat Plain (see Fig. 1).⁹³

In sum, Shengavit appears to be a town that was founded or expanded during the second part of the period during which the Kura-Araxes cultural tradition existed. The reasons for calling it a town include: 1) the size of the site is much greater than most Kura-Araxes sites, 2) the possibility that it supplied a commodity needed by both animals and humans — salt — and possibly grain to a population outside the site suggests that it may have had a broader networks of relationships than a village, 3) the presence of unwallled smaller villages in the immediate area, although their relationship to Shengavit remains to be determined, indicates that it was a center of occupation in the area of modern Yerevan, 4) the construction of the wall suggests that it may have been a refuge for other populations and also that it had the sort of leadership which could recruit and organise labour, including labour from surrounding villages, for significant public projects. Simonyan⁹⁴ suggests that there was a leader symbolised by what he interprets as a sceptre, made of agate, onyx, and other retouched stones, and he points to a few seals in the National History Museum, although excavators found no clay locks necessary for using the seals as administrative tools,⁹⁵ 5) There is evidence of craft and agricultural activities, such as pottery making, and tool and food production. Simonyan and Rothman disagree on what this has so far been likely to mean. To Simonyan, these are centralised, and specialised production, and those that control them were buried with exotic materials as symbols of rank. To Rothman, craft production at this stage of analysis seems more directed to the occupants of the town than to production for exchange. To him there is little evidence of special-function buildings or of social stratification represented in the size, layout, or (in a preliminary assessment) contents of buildings. Rothman views the Kura-Araxes societies as having quite narrow and local polities, whereas Simonyan, viewing the whole cultural tradition as being one social-political unit, regards it as being much more expansive. Overall, the exact role of Shengavit remains to be clarified as evidence presented in our analysis is further analysed.

Ritual at Shengavit and its Interpretation

Ritual may provide some more indications of what roles Shengavit's residents might have played. Certainly, the rituals and ritual spaces evidenced at Shengavit will tell us about the mental maps of its residents and cultural relationships based on other ritual spaces in other parts of the Kura-Araxes cultural tradition.

⁹² Rothman 2002; Gibson 2000.

⁹³ Kleiss and Kroll 1979, Areshian 2006.

⁹⁴ Simonyan 2013b.

⁹⁵ Rothman 1994.

The Spatial Context

As we discussed above, rituals create spaces within which cultural meanings are expressed and social relations are defined and reinforced. The architectural layout of potential ritual spaces is therefore the stage on which the symbols are placed and the ritual activities are carried out.

Public buildings: that is, buildings in which larger groups gather for various rituals (including political meetings, which tend to have ritualistic elements), tend to have open areas and seating for those meeting as a community or congregation. The orientation of the building to cardinal points can be meaningful, although at Kvatskhelebi, where buildings with ritual were oriented to cardinal points, the direction of the doors may simply be intended to avoid the winds.⁹⁶ Within the building, often the placement of symbols directs the attention of participants to the front, as in a modern church, synagogue, mosque, or Buddhist temple, or a House of Parliament, or Congress. This arrangement reflects the hierarchical nature of those at the front leading the ritual as opposed to those facing the front, the members of the community. In the Kura-Araxes cultural tradition the focus of public buildings is to the centre of the room, theoretically reflecting a more egalitarian community. However, there are examples of cultures with the central, as opposed to the frontal, orientation of the ritual space that have a less egalitarian nature.⁹⁷

In the Kura-Araxes cultural tradition the centre of public or communal rooms was often bracketed by painted benches (Fig. 9). At Godin Tepe IV, they are placed along three walls facing the doorway in the front, public room of what Rothman has interpreted as a feasting centre (the back room, entered by steps down into the building, appears to have been a kitchen where the feast was prepared).⁹⁸ The benches were painted black, and residents painted a design on the wall reminiscent of an andiron image from Yanik Tepe⁹⁹ and similar to incised pottery designs from contemporary levels at Shengavit (Fig. 9). The central room at Godin had a hearth and an ash pit on both the entry wall and on the wall opposite the doorway in the corner. It also had a low platform in the centre of the room (excavators did not recover whatever may have been placed on the platform). At Kvatskhelebi in level CI, which is parallel in time to the 3rd millennium BC or Early Bronze II deposits at Shengavit,¹⁰⁰ an unusual round house — most buildings were more squarely shaped with rounded corners — shared some of the same features. There was a red painted bench that encircled the back half of the building away from the doorway; other houses have back benches, but the excavator thought this one special.¹⁰¹ Residents placed 12 small bins filled with ash at the back of the benches. No stairways are apparent, although most of the buildings of this period were semi-subterranean. By contrast, only a small bench sat by the entry steps in Shengavit M5, and as far as we can tell it was unpainted.

⁹⁶ Palumbi 2008.

⁹⁷ Adler 1993; Waters 1963; Wills 2000.

⁹⁸ Rothman 2011.

⁹⁹ Rothman 2011, fig. 5.10.

¹⁰⁰ Palumbi 2008, Table 5.1.

¹⁰¹ Sagona 1984, p. 37.

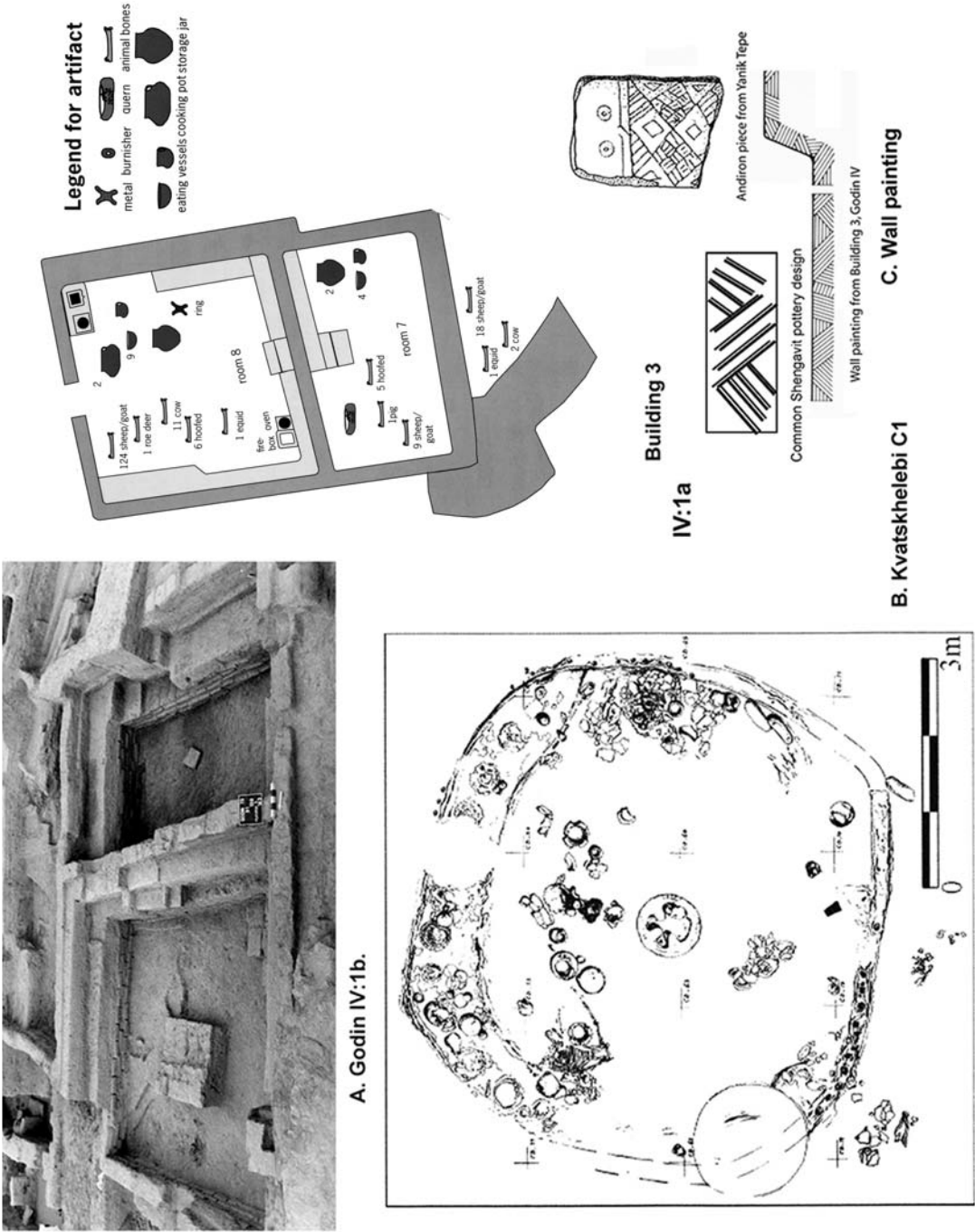


Fig. 9. Public ritual spaces A (Rothman 2011, fig. 5.3); B. (Palumbi 2008, fig. 5.12, 2); C. (Rothman 2011, fig. 5.10).

A different kind of public space may be represented at Mokhra Blur at a period contemporary with Shengavit. There a stone tower was topped by a standing dressed stone (Fig. 13).¹⁰² This is not so much a building whose interior is the focus of ritual, but likely a focus for communal ritual outside in a plaza or open area. Sardarian excavated a similar dressed stone at Shengavit, but we do not know in what context.

Ritual, however, is not limited to congregational or communal meeting spaces. At Late Bronze Gegharot¹⁰³ in the Aragats Mountains north of Shengavit small, round, built-up pits with pottery and other artefacts were certainly shrines (see below). Smith and Lyon interpret them as divination centres for those in the region,¹⁰⁴ all contained within a walled fortress. They had a centralising function, drawing people from the surrounding countryside, even if the ritual was carried out by individual supplicants (see below).

Ritual also occurred in what appear to be ritual spaces within private houses (Fig. 10). This continuity of ritual spaces into public and private spheres fits a continuing Middle Eastern pattern for domestic ritual. For example, despite the presence of large temples in the community in the Middle Babylonian period of southern Mesopotamia, the god of the house had a separate chapel or a ritual corner of the room.¹⁰⁵ At Pulur (Sakyol) and Norşuntepe there is evidence of ritual emplacements within otherwise domestic spaces. The pattern is particularly clear at Pulur (Fig. 10), as each of a set of adjoining two-room buildings seems to have had a similar ritual emplacement in the back room. One entered these rooms down a series of steps facing a hearth and a raised platform at Shengavit, Pulur, and Godin IV. Two bins filled with ash and burned pottery sat near the entrance by the steps at Shengavit and Pulur, as did similar containers at Godin IV (see above). The layout of ritual emplacements at Pulur and M5 at Shengavit were strikingly similar (Fig. 10), even to the presence of a narrow standing platform behind the hearth. At Pulur the hearth had three small channels carved in it, which Koşay suggests may have been “to drain away the blood of the animal sacrifices or the wine used in libations.”¹⁰⁶ At Pulur residents mounted a saddle quern on a clay basin by the corner. The same feature was built into the west wall of the room adjoining the M5 room where the ritual emplacements were, assuming the two rooms were part of the same construction (see below). Simonyan argues that like Godin, the one room was for ritual and the other for household tasks including food preparation.

Symbols in Kura-Araxes Ritual

If the spaces are the stage on which the mental maps of ritual are enacted and which define its audience, the symbols are the agents that define the meaning of the ritual. They speak to the subjects that are of concern to the participants, and initiate the ritual action. Often, they refer to shared myths and stories. We cannot know these myths from prehistory, nor the subject of commemorative rituals. But we can reconstruct the topics of interest to the ancients, based on which symbols they chose and how they used them.

¹⁰² Areshian 2006.

¹⁰³ Badalyan *et al.* in press.

¹⁰⁴ Smith and Lyon in press.

¹⁰⁵ Van der Toorn 1996.

¹⁰⁶ Koşay 1976, p. 136.

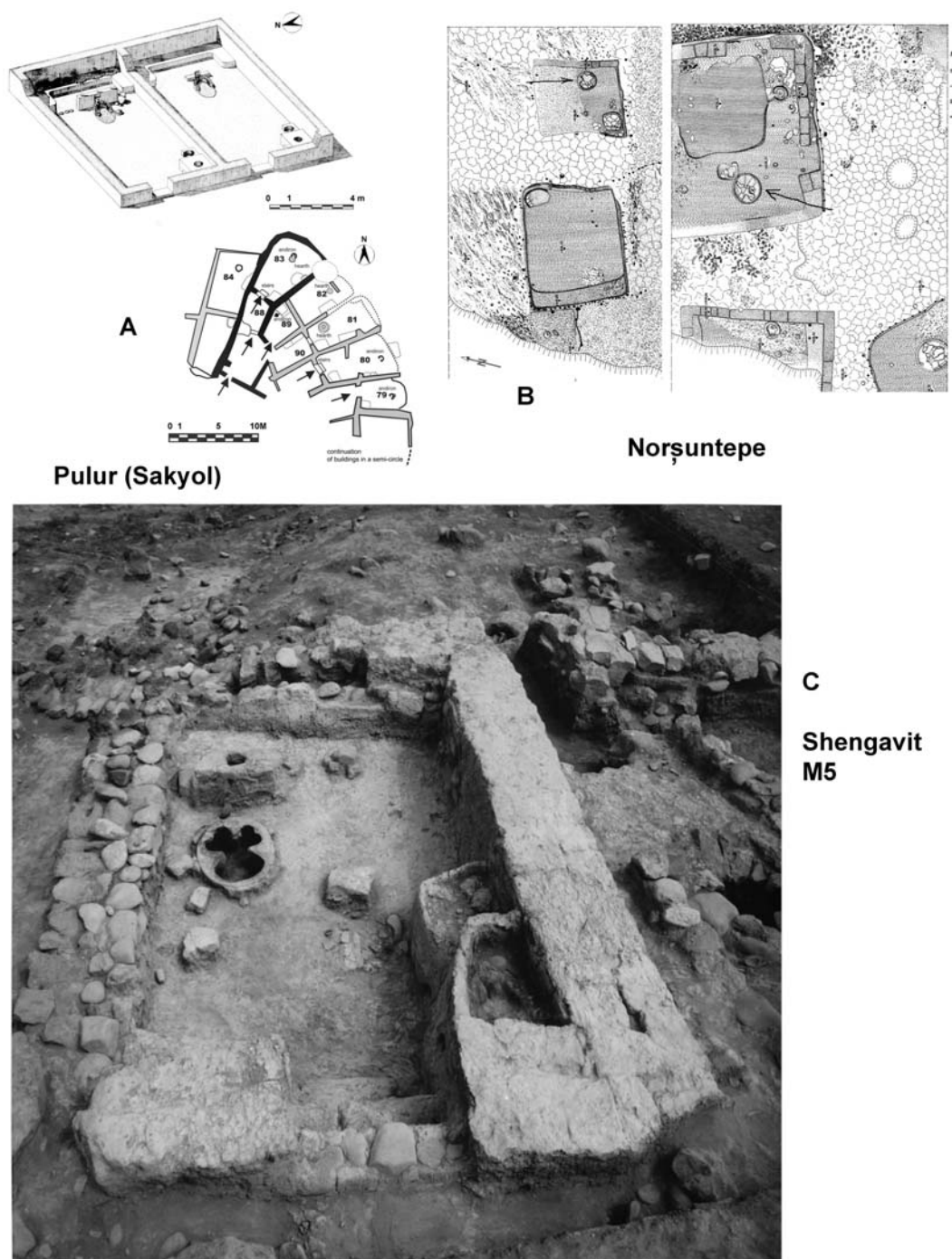


Fig. 10. Private house ritual spaces. A (Rothman 2011, fig. 5.11); B. (Hauptmann 1982, figs 29, 30); photograph, H. Simonyan.

The Hearth

According to Bayburtian, Sagona and others, the core of Kura-Araxes ritual is the hearth.¹⁰⁷ To say the “hearth” in reference to the Kura-Araxes cultural tradition is to refer to a number of quite different structures (Fig. 11). They generally fall into two categories: built-in or freestanding. The built-in ones, called *ojagh* in Armenian, tend to have broad raised lines and triangles on them. A common shape is three lobes (Fig. 11). Excavators found three-lobed hearths at Norşuntepe in the early third millennium BC/ EBI provenience K/L19 XIX (Figs 10, 11);¹⁰⁸ this date is as much a reflection of the Early Bronze Northern Mesopotamian Reserve Slip ware as the Kura-Araxes pottery. This form of hearth existed at Kvatskhelebi C and B,¹⁰⁹ and throughout the occupation of Shengavit, as well as other sites within the cultural transition.¹¹⁰ Common features include dimples (Fig. 11A, B, J) between the short parts of the three lobes. In M5 we found a small beaker sitting on the dimple. According to Simonyan, this is for libations. The hearths often are placed near the centre of the room where the centre pole rises to an opening in roof (*yertik* in Armenian) structure and smoke from the fire can escape.

At sites particularly to the west of Shengavit, excavators found quite a variety of andirons.¹¹¹ They do exist in the east and at Shengavit, but not all the andirons have the same elaborate decoration. Thus a cultural distinction is likely marked (see below), even though the ritual seems similar. The most common andirons are horseshoe shaped (Fig. 11D-F, I, K, L), although some are in the shape of bull horns and the front of the torso of a ram (11F). They are decorated with images of animals (Fig. 11D), or creatures who could be human or perhaps some mythical entity (Fig. 11K, L). However, many andirons are completely undecorated (Fig. 11I). Hayrapetyan noticed that many andirons had space for a larger and two smaller pots;¹¹² the whole meal could be cooking on the same surface. In addition, most have a tab on top, to which many have attributed their ability to be moved. Some have assumed that this feature is representative of a nomadic life.¹¹³ Rothman and Simonyan agree that the Kura-Araxes migrants were not primarily seasonal nomadic pastoralists, but rather populations who settled long enough to generate mounded sites, so we disagree on that interpretation.¹¹⁴ At the same time, in the round, perhaps ritual building in C1 at Khavskhelebi with its three-lobed hearth, the excavation team found an andiron on the red painted bench.¹¹⁵ A third fireplace tool we would call a griddle (Fig. 11G). It is often drawn and photographed upside down. Functionally, this griddle probably was used like the griddles on top of Zagros horseshoe-shaped ovens at Godin.¹¹⁶ We found many flat, highly burned pieces of ceramic in K6 that clearly were the tops of these griddle type of andirons. At Shengavit, their decoration was similar to the hearths — raised triangles and lines like other incised designs on Shengavit pottery (Fig. 11G).

¹⁰⁷ Sagona 1998; Smogorzewska 2004, Bayburtian 1938.

¹⁰⁸ Hauptmann 1982.

¹⁰⁹ Palumbi 2008.

¹¹⁰ Bayburtian 2011, pp. 31, 32, 34.

¹¹¹ Smogorzewska 2004; Takaoğlu 2000.

¹¹² Armine Hayrapetyan, personal communication.

¹¹³ Smogorzewska 2004.

¹¹⁴ Rothman n.d., p. 1.

¹¹⁵ Sagona 1984, p. 37.

¹¹⁶ Rothman 2011, fig. 5.29.

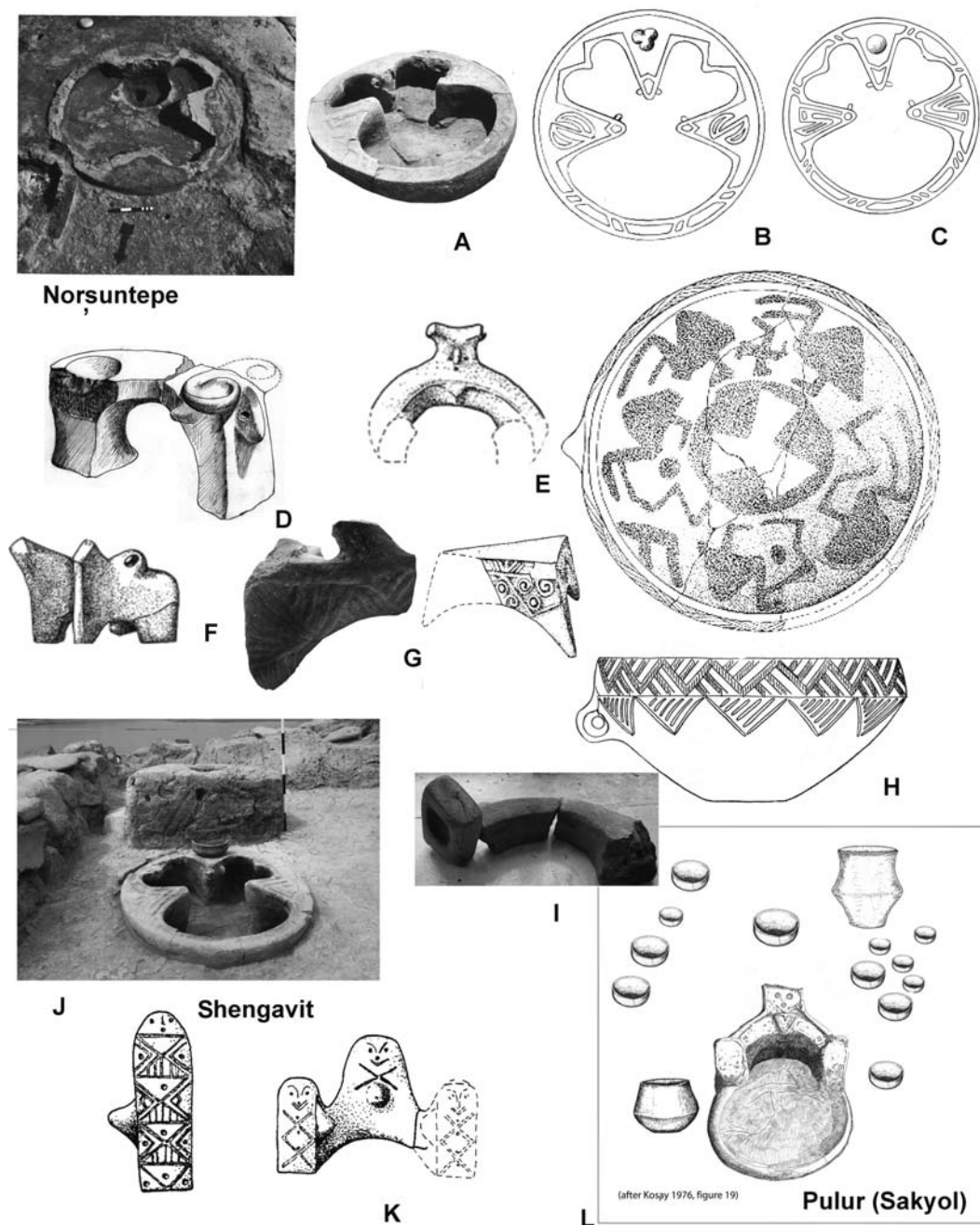


Fig. 11. Hearths and Andirons Norşuntepe (Hauptmann 1982, fig. 18: 2), A. Shengavit, (Bayburtian 2011, fig. 2); B & C. (Sardarian 1967, p.175; Sardarian 2004, fig. XC); D. Shengavit (Bayburtian 2011, fig. 15); E. Amitanis Gora (Smogorzewska 2004, fig. 2:1); F. (Smogorzewska 2004, fig 1: 5); G. (photograph M. Rothman), (drawing Smogorzewska 2004, fig. 11: 2); H. (Sardarian 1967: fig. LXI); I. Shengavit, K6 locus 1261, (photograph M. Rothman); J Shengavit M5 (photograph H. Simonyan), K. Andirons from the Amuq (Smogorzewska 2004, fig. 8: 3, 7, L. Pulur (Rothman 2011, fig. 5:12).

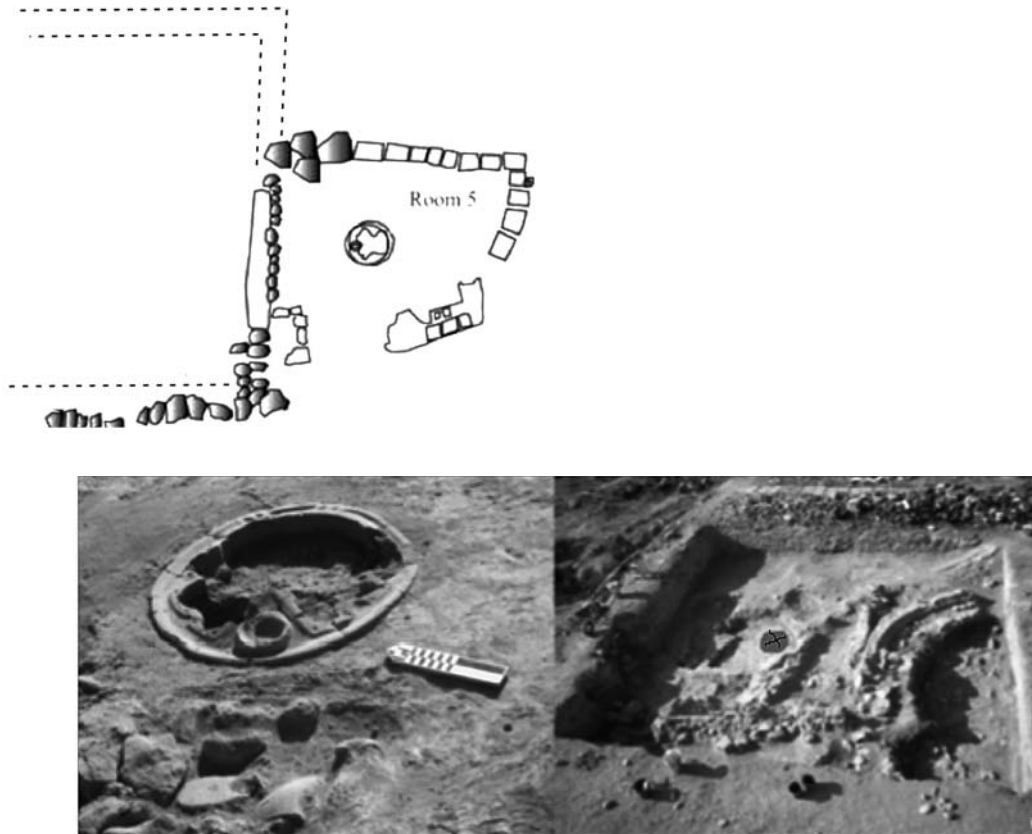


Fig. 12. Built in hearth, *ojagh*, in Shengavit Square K6 (photographs M. Rothman).

The Ritual Meaning of the Hearth. If the hearth is the centre of Kura-Araxes ritual, what is it an agent to convey? Fire is surely one element. Fire is one of the most universal symbols of ritual action, occurring in almost all cultures. The use of fire might be in the form of an eternal flame, candles or torches, or as a vehicle for sacrifice of burnt offerings.¹¹⁷ In sacrifice, many peoples believe the soul of the animal, or the smoke, enters the sacred realm and communicates the message of the supplicant to the divine.¹¹⁸ Eliade writes, “Fire with its warmth and light, fulfills a vital requirement of human life. Yet the same element can wreak sheer destruction. Both the positive and negative functions are united in fire’s role as an instrument of melting, refinement and purification.”¹¹⁹ In other words, fire reminds people of the essential nature of life and also of its re-making through rites of passage. That the ceramic built-in hearth (*ojagh*) may have had a special ritual function is further suggested by the treatment of one example at Shengavit in square K6 (Fig. 12).

¹¹⁷ Child and Child 1993, p. 72f.

¹¹⁸ Eliade 1958, p. 85; Takaoğlu 2000.

¹¹⁹ Eliade 1987, p. 340.

The hearth was placed in the middle of one of the small ancillary rooms of a burned square building. Presumably, after the main room went out of use, the ancillary rooms were abandoned as well. The ancients scrupulously cleaned out the room, much to our displeasure, leaving the *ojagh* in place, and then applied about 6 cm of clean, pure plaster on top of the hearth, as if to seal and perhaps to desacralise it. This is the only place excavators found this sort of cleaning and then sealing of an older floor with thick, pristine plaster, although Simonyan wonders whether the *ojagh* in M5 was not also desacralised.

As Sagona suggests, however, the topic of ritual involving the hearth may be best related to the associated symbols.¹²⁰ Some of these objects were intentionally buried around the hearth at Sos Höyük. A common symbol was an animal important for agriculture. For Sos Höyük, it was figurines of sheep (Fig. 13A-C). Excavators at Shengavit recovered a figurine of a bull's head, a carving of a phallus, obsidian arrowheads (not illustrated here), an antler from a red deer (Fig. 13D-F), and a human phalange in the room with the cult objects (Simonyan suggests that this could be used in an initiation ceremony or as an offering to the gods). All these symbols theoretically represent fertility and the integration of human beings and the natural environment on which they depended. In M5 at Shengavit, ash from the hearth contained wheat and barley seeds,¹²¹ supporting an interpretation of agricultural fertility as a key concern. Sagona reports no finds of buried seeds near the hearth at Sos Höyük. According to Sagona and Rothman, all the symbols discussed here reflect the concerns of a domestic economic unit. Even the obsidian points at Sos and Shengavit and the bone points relate to that world. Ironically, for a cultural tradition that is supposed to have specialised in metallurgy, crews found no metal objects associated with the hearth. Contrast this with the so-called royal tomb at Arslantepe with its many metal objects.¹²² Rothman considers Arslantepe, despite having some Kura-Araxes-like pottery, to be in a very different culture area than that of societies farther east in the highlands.¹²³ Simonyan, believing that the whole Kura-Araxes cultural tradition is one culture, sees the black painted pottery over the temple-palace as an indication of unity, while Frangipane and Palumbi argue that the Upper Euphrates black ware of the early third millennium BC is not Kura-Araxes at all.¹²⁴

Another set of symbols must relate to the meaning of the rituals conducted around the hearth, either built-in *ojagh* or decorated andiron in a ritual space (clearly not every andiron [Fig. 11I] or hearth is as symbolically decorated). One symbolic representation of this kind is found on a pot from Shengavit from tomb 2 in the necropolis (Fig. 11H). The outside of the pot has two common designs that seem to be related to ritual: triangles and a running design of lines drawn in opposite directions (the pottery tends to be incised, while on other objects, as below, the decoration tends to be raised; that is, there was a thick layer of clay placed on top and then all but the raised design was removed with a rounded stick or bone). These types of

¹²⁰ Sagona 1998.

¹²¹ Roman Hovsepyan, personal communication. This material was in a lower level within the hearth, showing it was there when the hearth was last used, not blown in later. The sample was, however, somewhat compromised, since these fills were first sieved through a fine metal screen.

¹²² Frangipane *et al.* 2001.

¹²³ Rothman 2014, p. 37.

¹²⁴ Frangipane and Palumbi 2007.

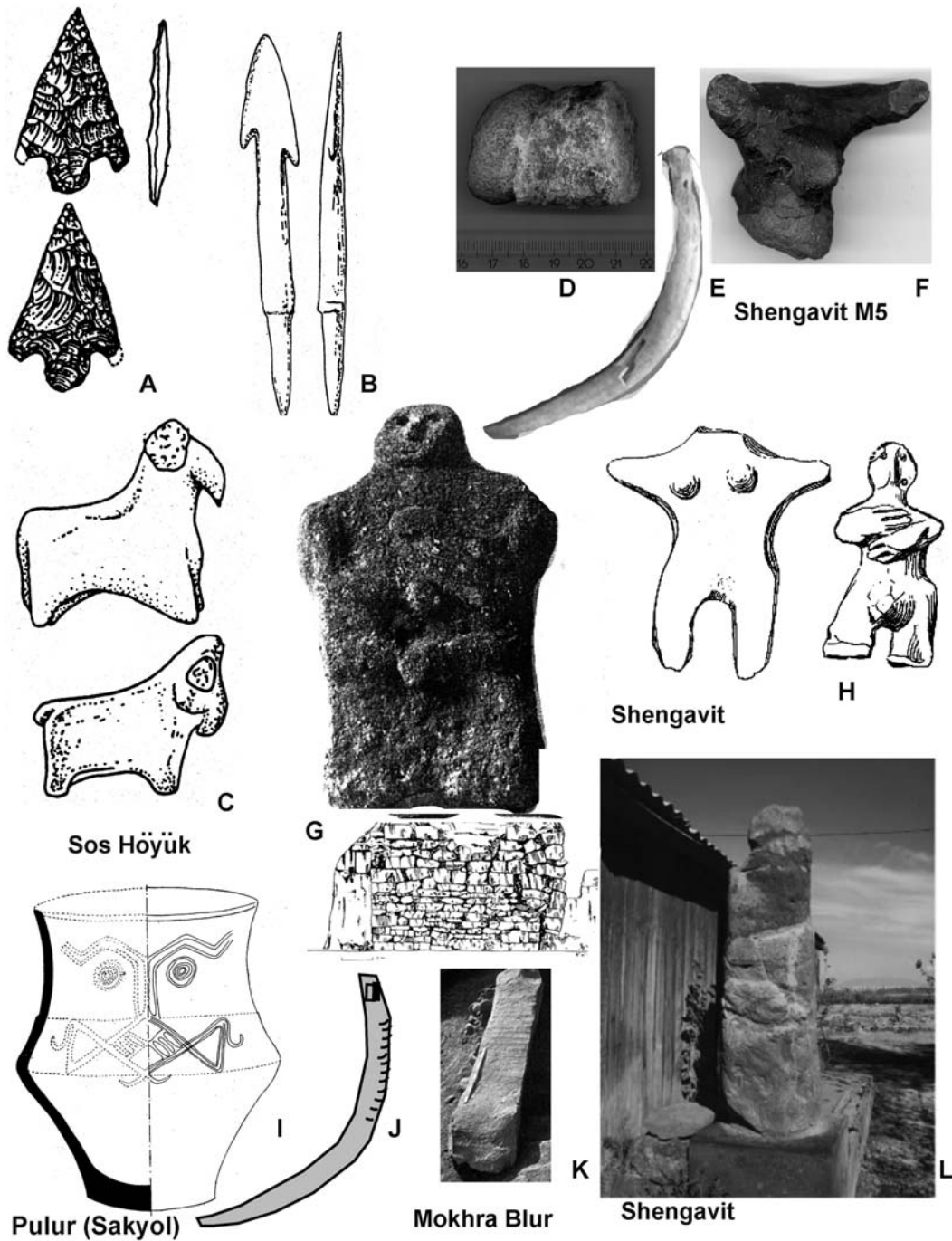


Fig. 13. Kura Araxes Ritual artifacts: A. Sos Höyük (Sagona 1998, fig. 4); B. Sos Höyük (Sagona 1998, fig. 4), C. Sos Höyük (Sagona 1998, fig. 4); D. Shengavit, M5, phallus (photograph H. Simonyan); E. Shengavit M5 red deer horn (photograph M. Rothman); F. bull's head (photograph H. Simonyan); G. & H. human figurines/ idols? (Simonyan 2013, pl. 10: 5 9, 10); I. Pulur Sakyol (Koşay 1976, fig. 83: 59); J. Pulur Sakyol (Koşay 1976, pl. 106n); K. Mokhra Blur (Areshian 2006, figs 18 and 18); L. Shengavit, dressed stone (photograph M. Rothman).

designs appear on the raised platform (altar?) in Shengavit M5, and on much of the pottery from there (see below) and from other sites (Fig. 9). The triangle motif is also visible on andirons from Pulus (Sakyol) (Fig. 11L) and the Amuq (Fig. 11K), and the griddles, andirons, and *ojaghs* from Shengavit (Fig. 11A, G, J). Sagona suggests these pottery designs may have a ritual meaning.¹²⁵ The inside of the pot has a painted image that must reflect one of the core myths relating the ritual to issues of importance to the people of the time (Fig. 11H). Pictured are a round object with three-lobed interior, clearly an *ojagh*, and five long-beaked birds and snakes. Simonyan sees a swastika near the top, and suggests that the meaning of the birds and snakes might be the fight of good versus evil around the center of the world, the hearth.¹²⁶ We believe it is fair to infer the relation of the *ojagh* to elements of the natural, perhaps spiritual, world in mythological terms.

In addition to this bowl, others are decorated with images of living beings. The large serving jar at Pulus (Sakyol) in one of the ritual emplacements (Fig. 10A, 13I) features one of a number of Kura-Araxes designs that represented a face. Andirons are often decorated with similar faces (Fig. 11K, L). None of these designs really resembles a human face, although there is no sure way to know what the artist was seeing or representing when drawing them. That they represent spirits or divine creatures makes sense in terms of the ritual, but there is no way to know for sure.

The Nature of the Ritual of the Hearth. So, within these spaces and with this variety of symbols, what were the steps of the ritual process? Certainly, food and drink played a part. At Pulus (Sakyol) (Figs 10A, 11L) the hearth and decorated andiron were surrounded by the large jar with an incised face and many small cups. M5 at Shengavit (see below) and the Godin IV feasting centre had many bones of butchered (and cooked) animals, mostly sheep/goat and cattle. According to our ethnobotanist, Roman Hovsepyan, “There was a lot of wheat and barley in the bins of M5. There were not other crop remains of any quantity.”¹²⁷ Clearly the worshippers were burning, not so much cooking, these plant remains.

Simonyan, who would call M5 “a temple of fire”, envisions a sacrifice of the fat of animals by practitioners (“priests”) performing the ritual. He also postulates that the hole in the raised platform or altar (Fig. 10C) behind the *ojagh* contained a wooden idol. Given the similarity to Pulus level X, room 83, one could postulate that a bowl to receive the blood or libation or burned grain is equally possible.

An interesting comparison is to the Late Bronze Shrines at Gegharot, about which Smith and Leon write:

The interior space of the room was organized around a large semi-circular packed clay basin situated towards the back of the room and set atop a clay platform. A stone stele at the back of the basin likely served as focal point for ritual attention. A pit dug into bedrock lay to the south of the clay basin. The ceramic assemblage recovered from the west terrace shrine was remarkably large and diverse, including numerous *in situ* storage vessels, pots, bowls, cups, and a series of variously

¹²⁵ Sagona 1998.

¹²⁶ Rothman is not sure that the object is a swastika, and is cautious about such a level of interpretation. The likelihood we can know what symbols meant that specifically to the ancients is less likely, in his opinion, than observing how and where symbols were used.

¹²⁷ Hovsepyan e-mailed information.

elaborated censers. Although not identical, these sculpted clay figures share a number of formal traits, including the presence of “horns” and vaguely anthropomorphic shapes. The idols were found in close proximity to ceramic forms that are most clearly linked to the combustion of aromatic or other substances. Indeed, the burning of substances — perhaps as an element of the trance or Platonic “madness” often described as critical to divination — appears to have been an important activity associated with the shrines at Gegharot, indicated by the presence of both simple and elaborate ceramic censers within or adjacent to the basins. The West Terrace shrine contained two censers, both ornately decorated with incised wave-like patterns, and a simple “chimney,” the basin of the East Citadel shrine included an *in situ* “chimney” with evidence of burning on the wide end that was found embedded in the ash. Taken in conjunction with the prevalence of ash in the basins, the censers clearly indicate that the burning of substances and the channeling of smoke were elements of esoteric ritual practice. Indeed, across the three shrines we have recovered evidence for three forms of divinatory practice: osteomancy (specifically astragalomancy using knucklebones of quadrupeds), lithomancy (divination by stones), and aleuromancy (divination with flour).¹²⁸

In M5 we found none of the elements of divination evident at Gegharot, nor did we find any idols, although the images on andirons at Pulur and in the Amuq could be the equivalent of idols. Although it is possible that Simonyan is right in believing some kind of idol rested in the depression, absent any direct evidence, it is impossible to know for certain. Nonetheless, the comparison really leaves three options. One is that this was simply a household shrine, a second that it was a temple (see above) or a public meeting place, or a third that it was rather a publicly shared ritual space for some kind of worship for a series of small groups or individuals, whether a burned offering, prayers to a spirit represented by an idol, commemoration of the dead, or a plea for fertility. We cannot know which. From what we know of it — we did not have time to dig further to the south to see if the room connected to another room or a plaza, and the area to its east was destroyed — this emplacement is unlikely to have served as space for a larger congregation like the contemporary temples of Mesopotamia, or the communal space in Building 3 at Godin IV.

M5

What we do know of M5 is that it was a relatively small room (no more than 2.5×4 m inside). The adjoining room (Fig. 10C) we have assumed was connected to it, although no connecting door is evident, and the doorway faces in a different direction — north toward the edge of the mound — from the ritual room, which faces south, although they share a common wall. A radiocarbon date from grain seeds inside the stone-lined pit in the second room places it later than the dates from inside M5. Simonyan suggests that the pit was built later, as the floor from which it was dug was 70 cm higher than the floor of the room with cult artefacts. The bottom floor of the adjoining room was the same as that of the room with cultic objects, implying they were likely occupied at the same time. That second room did contained elements in common with the Pulur ritual emplacement (see above).

¹²⁸ Smith and Leon, in press.

Species	Count
Domestic Cattle; <i>Bos taurus</i>	11
Sheep; <i>Ovis aries</i>	4
Goat; <i>Capra hircus</i>	3
Sheep or Goat; Small caprine	39
Pig; <i>Sus scrofa</i>	4
Dog; <i>Canis familiaris</i>	2
Red Deer; <i>Cervus elaphus</i>	1
Small artiodactyl	19
Large ungulate	3
Undetermined mammal	437
Unidentified fish	31
Total	554

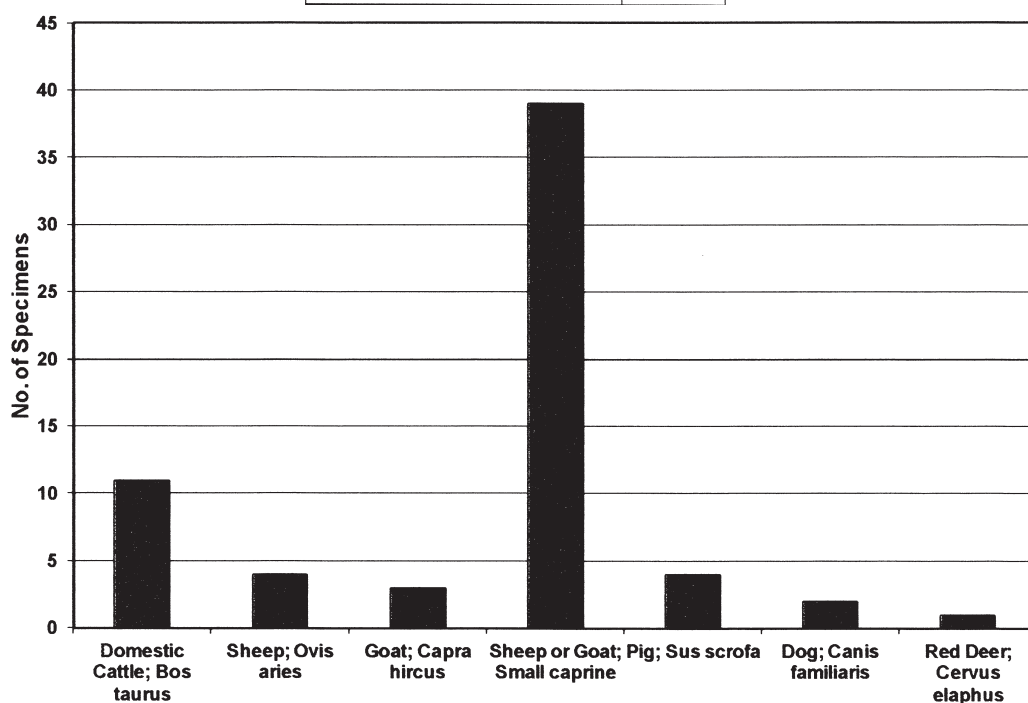


Table 2. Numbers and histogram of different animal species recovered from Shengavit M5 (Pam Crabtree).

Dr Pam Crabtree reports that the animal bones found in good context within M5 resembled those in other domestic contexts (Table 2), and nothing in their butchering indicated any different treatment or signs of burning.

The pottery from M5 (a broad sample is illustrated in Fig. 14) varies according to context. Excavators found three distinct strata in M5. The top stratum crossed over the remains of both rooms in M5, but lay within their circumference. A middle level was more easily distinguished

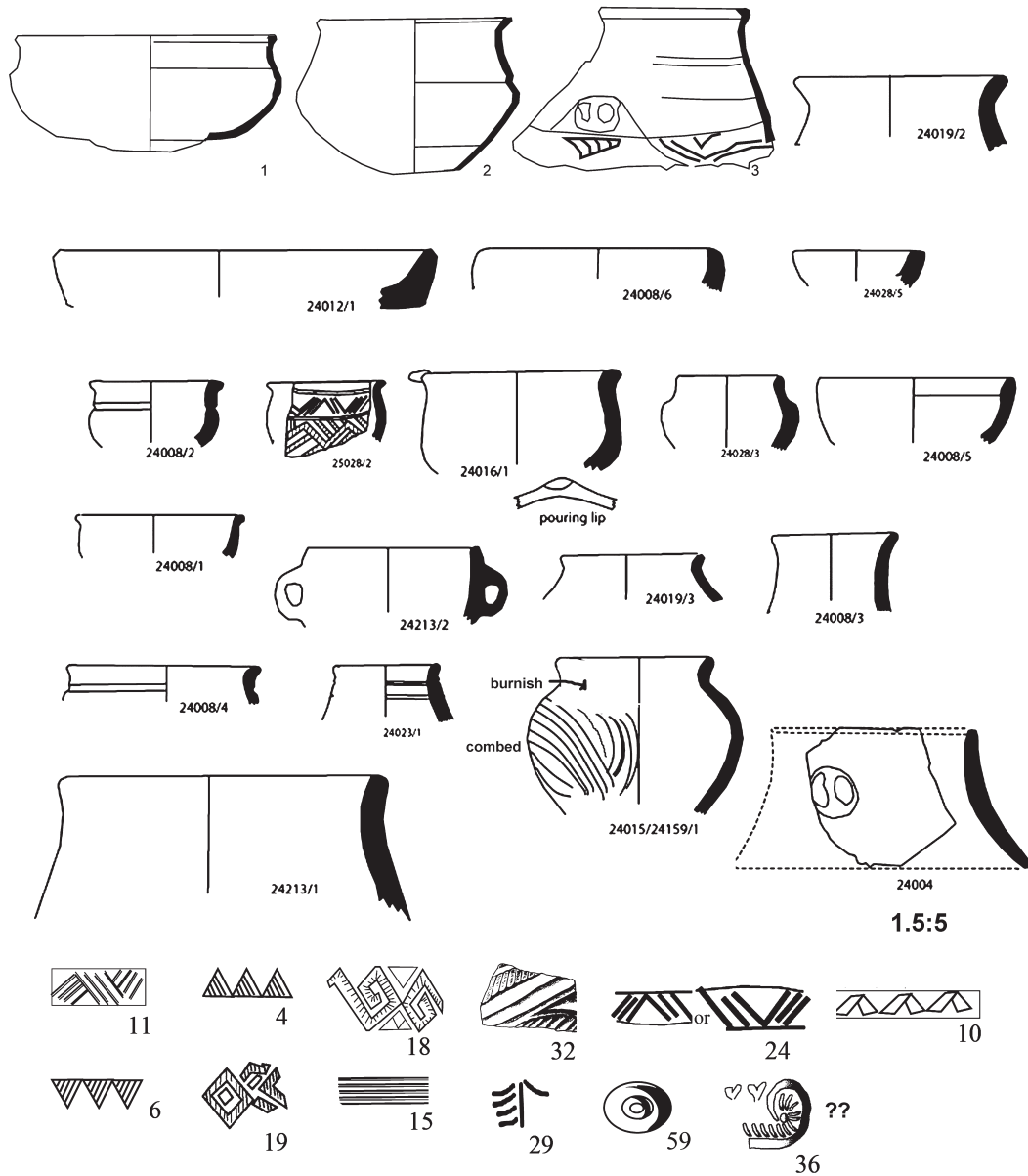


Fig. 14. Pottery from Shengavit M5 (drawings, M. Rothman).

in one room than the other, and the third level was basically the floor of the room with the cult artefacts. Based only on the floor loci (24012, 24013, 24016, 24024, 24025, 24026, 24027, 24028, 24019) of the room with a ritual emplacement, the majority of potsherds, counting both diagnostic and body sherds, were from cooking pots (87). These are easily distinguished

because of their tempers, dense white quartz or calcite bits, and because of their crumbly surfaces, often with burn marks. The second most common type are what we classify as fine wares (thin bodies, small size, finely levigated, and well burnished), with 44. This category consists mostly of cups, fine bowls, and the evanescent small beakers, which we believe were the equivalent of eating plates (the cuisine may have been dominated by stewing based on cooking pots and cooking methods on andirons). Last in number were what we classify as utilitarian vessels, with 40; these are larger vessels such as bowls, jars, and storage jars (*karases*) with thicker bodies, poorer firing, and with sand and often ground basalt grit tempering. Eleven of the vessels from all three levels of the room with ritual (so not only the floor) were decorated (Fig. 14). The most common design, number 11, has already been mentioned (Fig. 9C). Most of the rest were designs featuring triangles or diamonds. This all fits the idea that symbols of identity or belief were on display in this ritual context.

Taken together, there are indications of something special about this room, but whether it was a residence of a shaman, a temple, or a shrine is not possible to say for certain.

Changes in Ritual: Domestic versus Public Ritual

We tend to believe, however, that M5 did serve a more public role, like the Gegharot shrines. Whether the audience for that ritual was a lineage including some people whose houses were not on the site, or whether it was people from one district of the site is impossible to say. However, the history of Shengavit suggests some change in organisation over time. This change is evident in the very different types of houses in each phase,¹²⁹ and the building of a major public work, the wall. Earlier scholars characterised the Kura-Araxes culture as one of small villages and pastoral nomads with a simple kinship organisation.¹³⁰ However, Areshian proposes that in the Ararat area a transition from basic kinship structure to local incipient polities occurred during the Kura-Araxes horizon, particularly in the third millennium BC.¹³¹ This transition was marked by increasing agricultural and craft intensification and specialisation, trade, and the rise of political coordinating groups, like those who recruited and directed work for the wall. We have to remember how long this cultural tradition existed. For example, at Norşuntepe the three-lobed *ojaghs* appeared in the early third millennium BC, according to Hauptmann, Early Bronze I,¹³² while the ‘Palas’ is Early Bronze III; in other words, they occurred at the end or even beyond the end of the time when the Kura-Araxes cultural tradition was found over a very broad geographical area.

One would expect, therefore, some changes in ritual as well. We believe that there were. In the earlier third millennium BC Kura-Araxes tradition at Norşuntepe, Kvatskhelebi C1, and the early round house phase at Shengavit,¹³³ the three-lobed *ojagh* sits alone or by a stone centre pole for the roof. Even earlier, at Sos Höyük, neither an *ojagh* nor an andiron sat in the fireplace around

¹²⁹ Rothman n.d., p. 1.

¹³⁰ For example, Burney and Lang 1971.

¹³¹ Areshian 2006, 2007.

¹³² Hauptmann 1982.

¹³³ Bayburtian 2011.

which ritual symbols were buried. After about 2600 BC (for Shengavit, the possible date of building the wall), other features were added; namely, the standing platform with hole.¹³⁴ The saddle quern could have been part of the ritual process as well.

These variations may in part be related to whether the ritual is purely domestic or to some degree public. Sagona sees the rituals of the Kura-Araxes as private and domestic. He further sees them as rituals that seem to emphasise economic activities. Lastly, he points to a lack of human symbolic presence.¹³⁵ Theoretically, a ritual and divine symbolic system of a more centralised society should reflect a public aspect as well. A dichotomy between public and private ritual is evident in later state societies. In the shamanistic religions, like the pre-temple Mesopotamian period, the only human forms — which we have interpreted as shaman — are not fully human, but have animal features.¹³⁶ The emergence of both the state and Great Tradition religions is marked by imagery that must have been based on myths we will never fully understand or know. The human hero controlling wild bulls or lions was clearly one of these ideological and mythological images. This became the very definition of the social perception of the positive attributes of the king that validate his authority as ruler.¹³⁷ Certainly, the appearance of many male and female human figurines (idols?) late in the Shengavit occupation (Fig. 13G, H) implies somewhat of a different mental map of what is important. Perhaps it implies a subtle move toward a figure of influence, if not authority. The late idols are agents that reflect a cognitive map open to more kinds of control than apparent earlier in time in the lands of the Kura-Araxes tradition.

Social Organization and Cultural Difference

How, given the ritual and what else we know, can we understand the evolving social organisation of Shengavit? Certainly, the model we know well from Mesopotamia is not going to help us much.¹³⁸ Most scholars encountering an ancient population building a wall that would still be visible in the 1920s of our era, more than 4000 years later, would jump to a narrative about centralisation. Yet archaeological correlates of centralisation are arguably at best ambiguous at Shengavit (Simonyan disagrees with this). There appears to have been a major difference in house plan and size over the span of Shengavit's occupation. However, there is little evidence of differences in house size or plan within any of the three phases of architectural phases. Simonyan sees large scale production of craft goods at the site, which could imply the need for more centralized control, especially if one accepts his view of the Kura-Araxes cultural tradition rather as a single economic and political unit. Rothman, on the other hand, sees mostly production for consumption within the site or local area, and many separate polities and societies within the expanse of a very diverse Kura-Araxes cultural tradition.

¹³⁴ There was a hole on the side of the platform which we assumed was accidental, but perhaps it, too, was a channel emptying blood or libation in front of the *ojagh*.

¹³⁵ Sagona 1998.

¹³⁶ Rothman 2002.

¹³⁷ Winter 1987, 1997.

¹³⁸ Rothman 2004.

Graves should give us an idea but in this case there are problems. There are not many graves or tombs to discuss, but some are communal burials (Fig. 15). The others do have exotic materials. Simonyan believes the graves with richer material date to the period of the building of the wall and the cultic emplacement in M5,¹³⁹ which would suggest the possibility that the social changes we see in the building layout and ritual practice may be evident in graves. More detailed final analysis of graves may make this clearer.

How, then can we make sense of the changes and the coordination necessary to build the wall and perhaps plan for storage of grain? A truly centralised political system with leaders having the power to make decisions and enforce them seems to Rothman unlikely, for the reasons enumerated above. A society in which kinship was its public face seems likely. Yet, there is also a need for coordination of the wall building and possibly grain storage. The promotion of individuals or groups to higher ranking places therefore must have found a way to express itself within a kinship mode. Symbolising a difference in rank would undercut the very rationale for demanding surpluses and labour from one's extended family. There are examples of just such a societal organisation historically.¹⁴⁰

Changes in ritual from the emergence of human-related idols to the large stone markers at Shengavit and Mokhra Blur, along with the building of larger internally divided buildings suggest such a pattern, although it should be clearer when our analyses of the site are completed and published.

Regarding the question of the relations between societies within the Kura-Araxes cultural tradition, our second overarching question, Shengavit and Pular (Sakyol) provide an interesting and meaningful contrast. The ritual space and the ritual process appear to have more similarities than simple coincidence would support. The ritual process was likely very similar, and its meaning very likely was shared. At the same time, there are differences that are significant; for example, the use of a decorated andiron instead of the built-in *ojagh*. By comparison, one could say that all Christian denominations shared a common ideology, vested in the symbol of the cross, yet the differences between the Catholic crucifix, the Protestant cross, and the Orthodox cross represent more than style. They reflect historical, ethnic, and liturgical differences. Likewise, the measure most often used by researchers on the Kura-Araxes cultural tradition, pottery style, reflects similarities and differences.¹⁴¹ From the small sample of vessels Koşay published, the two sites appear to have had a very different set of styles.¹⁴² Some simple shapes are the same, but the typical vessel from Shengavit with two carinations in the body is completely absent from Pular (Saykol), although they clearly are contemporary. Whereas perhaps 35 per cent of the pottery from Shengavit, including storage, utilitarian and fine wares, are decorated with various designs, the only ones that bear designs at Pular (Saykol) seem to be large jars, at least one of which is part of a ritual of libation (Fig. 13I). Compared to sites of Mesopotamian or Upper Euphrates cultures, the two sites represent parts of a common cultural tradition, but they were probably different culturally, much as Spain and Portugal are both Catholic countries, yet cannot be said to be identical linguistically, historically, or culturally.

¹³⁹ Simonyan 2013b, p. 41.

¹⁴⁰ Mills 2000.

¹⁴¹ Rothman 2014.

¹⁴² Koşay 1976.



A



B

Fig. 15. Graves from Shengavit A. (Sardarian 2004, pl. 68); B (photograph H. Simoyan).

Conclusion

We are aware that much work needs yet to be done on the Kura-Araxes cultural tradition and on analysis of the material from Shengavit. We believe, even at this point, that we can assert with some confidence that ritual from Shengavit and other sites reflects social organisation. We believe that our data leads toward a conclusion that changes did occur and were reflected in changing ritual practice and symbolism.

Continuing with this type of ritual analysis will require much more data. A small sample of published pottery types and other artefacts without detailed information on counts and contexts is not going to be enough. With easy access to the worldwide web, publishing the detail necessary for this and other types of analysis will be ever more important. So, too, will be adopting an analytical view that it is the people who make the artefacts, with all their rich diversity of economic adaptations, spiritual ideas, and social relationships, who are our subjects, not the artefacts per se. Artefacts, after all, cannot speak outside of the human mental maps that created them.

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Reassessing the *Dunnu* Institution in the Context of the Middle Assyrian Empire

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Abstract

*This paper considers the Middle Assyrian dunnu in order to elucidate how this particular institution functioned in the context of an emerging Assyrian Empire in the Late Bronze Age. It will investigate how a pre-existing institution that had been in existence for centuries was transformed to serve imperial needs in this period. In particular, the question of how dunnus functioned in the broader imperial economy will be addressed. Further, this paper also seeks to explore why the dunnu institution flourished in the early Assyrian Empire but did not play a role in the later stages of that empire.**

Introduction

During the first phase of territorial expansion of the Assyrian Empire and in the consolidation of control over conquered territories in northern Syria, it appears that a large number of *dunnu* settlements were created in the occupied provinces. As a starting point, following Wiggermann and Radner,¹ *dunnus* can be defined as agricultural estates that served to produce agricultural surpluses for the benefit of an elite owner usually resident elsewhere. Although this might at first sight appear a fairly unproblematic definition, there are major questions concerning how the agricultural surpluses obtained were put to use in a traditional economy in which agricultural yields could only be consumed locally and to what degree we can think of these agricultural estates as truly private entities.

The aim of this paper is to investigate why *dunnus* became important in the Middle Assyrian period (ca. 1350–900 BC), and how they functioned in this early phase of imperial expansion. Further, to better understand the *dunnu* of the Middle Assyrian period they will be compared to privately owned agricultural estates of earlier periods, and the disappearance of the *dunnu* as an institution in the Neo Assyrian period will be discussed.

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¹ Wiggermann 2000; Radner 2004.

Dunnus and their predecessors, designated *dimtus* (more below), have been the topic of numerous studies in recent years,² but how these institutions functioned in the broader economy remains inadequately understood. In this paper the nature and function of the *dunnus* will be evaluated, drawing on recent data from various Assyrian provinces. On this basis, the role of these settlements in the creation and consolidation of imperial power will be evaluated.

Dunnus are documented on cuneiform tablets dating to the Middle Assyrian period. In some cases these texts are found within settlements that can be identified as *dunnus* with some confidence. In other cases, textual data may help in the identification of further *dunnu* settlements or may inform us about the nature and ubiquity of these settlements. By contrast, archaeological data, that is, settlement remains and artefacts, are mute with regard to the question of whether or not a particular settlement qualifies as a *dunnu*. This is not a trivial observation when trying to define the characteristics of *dunnu* settlements especially when taking into account that there appears to be substantial variability in the few *dunnus* that have been excavated to date. Nonetheless, it is only through the combination of textual, artefactual, and settlement data that we can aspire to a better understanding of *dunnu* settlements.

Middle Assyrian Dunnus and Agricultural Development

The word *dunnu* has various associated meanings that revolve around strength/force and fortifications. It is applied to fortified areas and associated fields in the Old Akkadian and Old Babylonian periods.³ The best translation would probably be fortified estate.⁴ Alternatively the word *dunnu* could also refer to something that has been made firm or strong, in the sense of an establishment or foundation.⁵ In the Middle Assyrian period the word is used to denote a family-owned agricultural estate of which: first, the owner lives elsewhere, usually in a city; second, the land was granted by the king to his officials to enable them to cover their expenses; and, third, the purpose was to produce agricultural surpluses.⁶ What is not clear from this description is whether all *dunnus* were fortified, or whether they also encompassed non-fortified agricultural estates.

Dunnus are institutions that occur mainly in the Middle Assyrian period dating to ca. 1350–900 BC, albeit with some earlier precursors (see below). The Middle Assyrian state emerged in Upper Mesopotamia in the latter half of the Late Bronze Age. The consensus view is that the rise of Assur began after the defeat of the Mittani at the hands of the Hittite king Suppiluliuma (1344–1322 BC), after which the former vassal Assur could become independent and fill the power vacuum which had emerged.⁷ A contrasting position is that Assyria never was a vassal and it subdued the Mittani as a rival rather than a former vassal.⁸ Whatever the case, it is clear that Assyrian ascendancy in northern Mesopotamia coincided with a decline in Mittani power. Within a

² Wiggermann 2000; Kolinski 2001; Radner 2004; Akkermans 2006; Brüning and Akkermans 2010; Tenu *et al.* 2012.

³ CAD III, pp. 184–185; Radner 2004, pp. 70–71.

⁴ Radner 2004, p. 69 uses “Wehrgehöft”.

⁵ Suggestion of an anonymous reviewer of this paper.

⁶ Wiggermann 2000, pp. 173–174.

⁷ van de Mieroop 2004, pp. 169–174; Tenu 2009; Caramelo 2012.

⁸ Llop 2011, p. 601.

century the Assyrians controlled all former Mittani territories east of the Euphrates, which were also called Hanigalbat, with the Hittites controlling both banks of the Euphrates Valley and western Syria.

The Middle Assyrian state implemented various strategies to control, exploit, and develop the newly conquered territories in the lands of Hanigalbat. These included a wide array of practices such as the deportation of populations, the construction of military strongholds, the destruction of previously existing settlements, and the agricultural development of previously uncultivated or abandoned landscapes, but also the incorporation of small existing polities such as “the land of Mari” into the Assyrian state.⁹ One element that is of particular interest here is the policy of agricultural development of previously uncultivated or abandoned landscapes in a number of conquered territories, which was often achieved through the creation of a series of *dunnu* settlements.

This policy of agricultural development should probably not be considered only in functional terms. Assyrian sources make it clear that bringing the steppe under cultivation was an ideologically charged activity. Although, this claim can be made more broadly for Mesopotamian civilisation,¹⁰ it has been argued that the theme of bringing the steppe under cultivation was especially important for the Assyrians in the Late Bronze and Iron Ages.¹¹ In this time period agriculture in northern Mesopotamia was probably hampered by adverse climatic conditions,¹² which probably triggered large canal-building projects¹³ that might have been constructed in part as an effort to offset drier conditions and maintain agricultural productivity.¹⁴

Kühne¹⁵ has suggested that for the Assyrians the uncultivated steppe was synonymous with the wilderness, chaos, and that to extend the agricultural landscape was to spread civilisation. The Assyrian concern with cultivating the steppe is most clearly expressed in much later texts from the Neo-Assyrian period, in which for example King Sargon (721–705 BC) is described as the initiator of large canal building projects, creating landscapes of plenty in previously barren locations.¹⁶ While this example dates some five centuries after the period of concern here, a Middle Assyrian precedent for these activities, is found in the time of Tukulti-Ninurta I (1243–1207 BC), a Middle Assyrian monarch who undertook large irrigation projects for the construction of Kar-Tukulti-Ninurta,¹⁷ and is described as follows:

At the command of Assur, the god who loves me, I built before my city, Assur, a city for the god Assur on the opposite bank, beside the Tigris, in uncultivated plains (and) meadows where there was neither house nor [dwelling], where no ruin hills or rubble had accumulated, and no bricks had been laid. I called it Kar-Tukulti-Ninurta. I cut straight as a string through rocky terrain, I cleared a way through high difficult mountains with stone chisels, I cut a wide path for a stream which supports life in the land (and) which provides abundance, and I transformed the plains of my city into irrigated fields.¹⁸

⁹ Szuchman 2007; Tenu 2009; Harmanşah 2012; Shibata 2012.

¹⁰ Wiggemann 2011.

¹¹ For example, Kühne 2011.

¹² Kirleis and Herles 2007; Kaniewski *et al.* 2010; Langgut *et al.* 2013.

¹³ Bagg 2000.

¹⁴ Reculeau 2011.

¹⁵ Kühne 2011, p. 144.

¹⁶ Bagg 2000, p. 314; Radner 2000, pp. 236–238; Wilkinson *et al.* 2005.

¹⁷ Bagg 2000, pp. 306–311.

¹⁸ Lines 10–20 VA 8834, see Grayson 1987, p. 277.

There is more evidence to suggest that an expansion of farming took place from the (early) Middle Assyrian period onwards. From about 1500 BC we can document the foundation of a series of new towns near Assur in locations where rain-fed agriculture would have been extremely difficult,¹⁹ and a little later, the colonisation of the Wadi Ajij Region.²⁰ Further, various place names in Wadi Tharthar region, such as “well/cistern of the irrigation ditches” suggest irrigation practices,²¹ as do data from the Dûr-Katlimmu, which points to canals being (re)constructed along the Lower Habur in the thirteenth century BC.²²

In concert, these data suggest that the agricultural colonisation of previously uncultivated or abandoned steppe regions, in some cases aided by irrigation technology, was an integral part of the Assyrian expansion from the early Middle Assyrian period onwards, a practice that is also clearly in evidence in the Neo-Assyrian period.²³

In the Middle Assyrian period this practice of transforming the steppe into cultivated land seems to have been achieved in part through the establishment of *dunnu* estates. There is evidence that suggests that in some conquered regions a substantial part of the farmland was taken up by *dunnu*s. Radner²⁴ argues, on the basis of textual evidence — which provide evidence for a total of four *dunnu* estates in a relatively small region —, that most of the farmland in the Upper Tigris region may have been farmed through the *dunnu* system in the Middle Assyrian period. Likewise, there were probably a substantial number of *dunnu*s in the Balikh Valley.²⁵

The idea that *dunnu* estates comprised most of the farmland in some regions, although plausible, is difficult to evaluate on the basis of archaeological data for two reasons. First, even large *dunnu*s, such as the one at Tell Sabi Abyad which measures about 1 ha,²⁶ are relatively small in comparison to most sites documented by archaeologists, and few settlements of this size have been documented in archaeological surveys (see below). Second, as will be demonstrated later, there are currently no clear criteria for distinguishing *dunnu* settlements from other types of small settlements on the basis of particular artefacts or features. In the absence of such distinguishing elements it is difficult to assess the proportion of *dunnu* settlements in particular regions.

The *dunnu* in diachronic perspective

Dunnu estates in the strict sense are only documented for the Middle Assyrian period. However, in the preceding Mittani period (ca. 1500–1350 BC) an institution existed that was called *dimtu*, a term which literally means “tower”,²⁷ and appears to denote a very similar institution to the *dunnu*. Like the *dunnu*s, *dimtus* are family-owned agricultural estates that comprise farmland, a settlement, and various facilities, which could include barns and threshing floors.²⁸

¹⁹ Miglus 2011; Mühl 2012, p. 89.

²⁰ Pfälzner 1993.

²¹ Wiggermann 2000, p. 178.

²² Kühne 2011, pp. 145–146.

²³ Parker 2003.

²⁴ Radner 2004, p. 71.

²⁵ Lyon 2000, pp. 100–101; Duistermaat 2008, p. 26.

²⁶ Akkermans 2006; Wiggermann 2000.

²⁷ Kolinski 2001, p. 3.

²⁸ Zacagnini 1979, p. 51; Koliński 2001, p. 20.

However, the word *dimtu* can designate various other things, such as: an estate settlement; a tower within this; or a region surrounding a *dimtu* estate. Moreover the word *dimtu* might occur as a name of a settlement that started as an agricultural estate and transformed into a village or town.²⁹

Dimtus are earliest attested in the Ur III state (2112–2004 BC) and continue in the Middle Bronze Age (or Old Babylonian period, ca. 2000–1600 BC) in southern Mesopotamia and Elam, but appear to be absent in northern Mesopotamia. By contrast, in the Late Bronze Age (1600–1200 BC), *dimtu* are attested mainly in northern Mesopotamia in the geography that is part of the Mittani state. Although few sources exist from the Mittani heartland, the texts from the client kingdoms of Arraphe in the east and Ugarit in the west both show a large number of *dimtu* settlements. In the archives from Arraphe no fewer than 216 *dimtu* are mentioned, and in Ugarit there are 81.³⁰ However, it is important to stress that the *dimtus* of Arraphe and Ugarit were very different institutions: those of Ugarit were royal estates of the local dynasty which continued to exist after the demise of the Mittani, whereas those in Arraphe were family owned. Thus, we should beware of conceiving of *dimtus* as homogeneous and comparable institutions across Mesopotamia and through time, although it is plausible that within a specific horizon, such as Arraphe, they were more clearly circumscribed institutions.

Further, the relation between the concepts of *dimtu* and *dunnu* remains problematic. The two words occur next to each other in the Old Babylonian period.³¹ In Middle Assyrian archives *dimtu* are mentioned alongside *dunnu*.³² Finally, in Kassite Babylonia the two terms also occur next to each other, with an increase in the proportion of *dunnu* over time.³³ The co-occurrence of the two terms in various regions suggests that *dimtu* and *dunnu* estates, although similar in many respects, were perceived as distinct institutions. This is all the more relevant given that the Middle Assyrian administration took over many ruling practices from the preceding Mittani state, including the use of Hurrian titles and functions in the army and administration.³⁴ Within this context the usage of the term *dunnu* instead of *dimtu* — which is the normal term in the Mittani state — in the Middle Assyrian period is all the more remarkable, and suggests a conscious choice for a different type of institution, perhaps mirroring a similar development in Kassite Babylonia.

Given that the textual data suggest that both *dimtu* and *dunnu* designate agricultural estates, perhaps their difference is implied by their literal meanings: whereas *dimtu* estates contained a fortified building, namely a tower, *dunnu* estates were fully fortified, that is, surrounded by fortifications. This shift seems to be borne out by the one excavated settlement that might have developed from a, hypothetical, *dimtu* to a, definitive, *dunnu*: Tell Sabi Abyad.³⁵ In the Mittani period phase, that is level 7, the site consisted mainly of a single large tower with heavy walls of 2 m thick measuring about 18 × 21 m, which contained 10 rooms (Fig. 1). It has been suggested

²⁹ Kolinski 2001, pp. 19–21.

³⁰ Kolinski 2001, appendices A and B.

³¹ Kolinski 2001, p. 29.

³² Kolinski 2001, p. 31.

³³ Kolinski 2011, p. 33.

³⁴ Postgate 2011, p. 91.

³⁵ Akkermans 2006; Brüning and Akkermans 2010; Akkermans and Wiggermann in press.

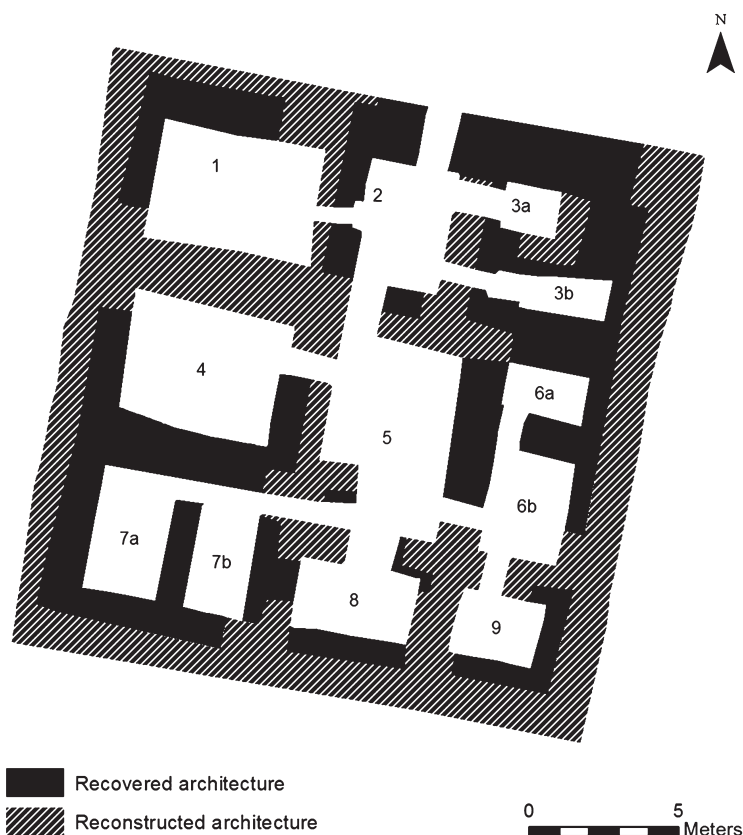


Fig. 1. Plan of the level 7 tower at Tell Sabi Abyad. Plan produced by Tijm Lanjouw.

that this level 7 settlement might have been a *dimtu*,³⁶ although textual evidence to confirm this identification is lacking. In the subsequent Middle Assyrian phase of level 6 an area measuring about 60×60 m was surrounded by a perimeter wall of about 2 m thick, which was in turn surrounded by a moat, which measured some 80×80 m. In this case, if the identification of the level 7 structure as a Mittani-period *dimtu* is accepted, there is indeed a transformation of an estate centred on a tower into one in the form of a fortified estate.

Such a literal interpretation of the distinction between *dunnu* and *dimtu* estates is based on very little data, however. Very few *dunnu* settlements have been identified on the ground (see below) and only one possible further *dimtu* settlement has so far been identified (Fig. 2). The latter, at Tell Fakhar, can be described as a tower-like building.³⁷

³⁶ Wiggermann 2000, p. 184; Kolinski 2001, p. 60.

³⁷ Kolinski 2001, pp. 39–45.

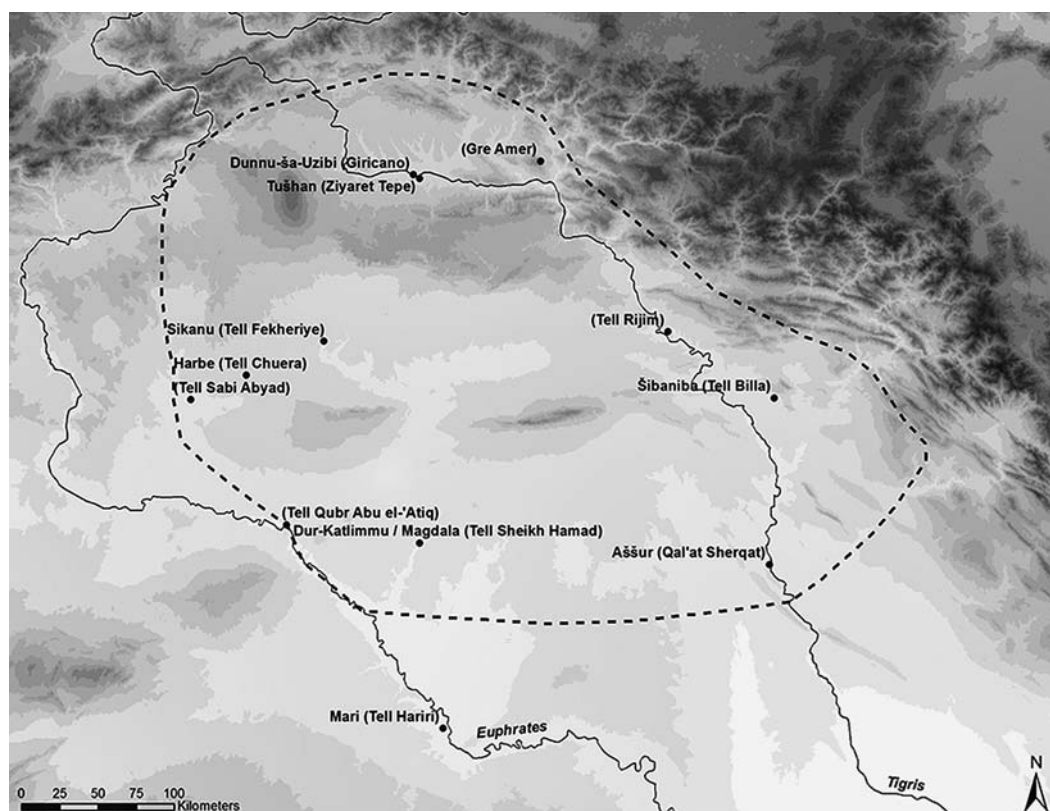


Fig. 2. Map of the Middle Assyrian Empire with sites discussed in the text. Produced by Tijm Lanjouw.

The Archaeology of *Dunnu*

Apart from Tell Sabi Abyad claims for *dunnu* settlements have been put forward for Giricano;³⁸ Tell Qabr al 'Atiq;³⁹ Tell Rijim;⁴⁰ Tell Chuera;⁴¹ and Tell Hariri Zrir.⁴² Another possible *dimmtu*/*dunnu* settlement was excavated at Gre Amer.⁴³ Of these seven *dunnu* identifications only two are based on strong textual evidence: Tell Sabi Abyad and Giricano. The identification of Tell Chuera as a *dunnu* is not considered possible by those who studied the relevant archives.⁴⁴ The identification of Tell Rijim as a possible *dunnu* of the Old Assyrian period is hypothetical and is based mainly on the fact that the Tell Rijim settlement was relatively small in size. Too little

³⁸ Radner 2004.

³⁹ Monterro Fenollos *et al.* 2010; 2011; 2012; Tenu *et al.* 2012, pp. 148–9.

⁴⁰ Kolinski 1997, p. 297; 2000.

⁴¹ Harmanşah 2012, p. 365.

⁴² Tenu *et al.* 2012, p. 148.

⁴³ Pulhan and Blaylock 2013.

⁴⁴ Wiggermann 2000, p. 172; Jakob 2009, pp. 8–11.

has been published on Gre Amer to assess the nature of this settlement.⁴⁵ Finally, the data for Tell Qubr al 'Atiq and Tell Hariri Zrir are far from unequivocal. At Tell Qubr al 'Atiq the Middle Assyrian settlement at this site, measuring about 2 ha, was located on top of a 12 ha Early Bronze Age town with a circular plan, a situation not dissimilar to that at Tell Chuera. The location of the site controls the entrance to the Halabiya Gorge. It is possible that the site indeed represents a fortified farmstead, but at present this cannot be demonstrated. The building remains excavated so far at Tell Qubr al 'Atiq⁴⁶ appear similar to 'building P' of Tell Schech Hamed / Dûr-Katlimmu, which has been interpreted as an administrative building,⁴⁷ rather than resembling the buildings found at Tell Sabi Abyad and Giricano. At Tell Hariri Zrir a perimeter wall was found measuring about 50 by 60 m that has been compared to Tell Sabi Abyad.⁴⁸ However, at Tell Hariri Zrir no Middle Assyrian artefacts were discovered,⁴⁹ although there were some Middle Assyrian remains elsewhere on the site both in buildings and in a cemetery, mixed in with Kassite materials.⁵⁰ Thus, the data at Mari do not suggest a Middle Assyrian agricultural estate, but a mixed assemblage of Middle Assyrian and Kassite artefacts in a cemetery and settlement context, possibly in association with a so far undated small fortification.

Recognising *dunnu* estates on the basis of archaeological data, whether from surveys or excavations, is difficult in the absence of clear criteria. Kolinski⁵¹ suggested that *dimtu* and *dunnu* settlements were typically less than 1 ha in size and that small sites found in surveys could index these estates. However, it is likely that there were also many small villages and hamlets of similar size in this period, and it is not clear how these would be distinguished from the estates. A large number of surveys have of course been undertaken in northern Mesopotamia in recent decades.⁵² However, most of these surveys have been extensive in nature, and relatively few sites of below 1 ha, especially if they are not located on larger pre-existing mounds, have been reported. Where such small sites have been reported,⁵³ separating Mittani period sites and Middle Assyrian sites is not straightforward. Most importantly, however, determining whether or not such sites might have been *dunnus* or simply small agricultural settlements is impossible on the basis of survey data.

To complicate matters further if we compare the two unequivocal cases of *dunnu* settlements, that is Tell Sabi Abyad and Giricano, these sites differ considerably. Whereas Tell Sabi Abyad is a fortified estate that includes buildings of various functions, such as a massive tower and an elite residence, within its walls and measures nearly 1 ha in size (see below), Giricano is a much smaller settlement, and no fortifications or monumental structures have been found at this site. Interestingly, the Tell Sabi Abyad *dunnu* matches with a description of a *dunnu* in *KAJ* 20 (VAT 8777),⁵⁴ where it is said to possess a gate and a courtyard.

⁴⁵ Pulhan and Blaylock 2013.

⁴⁶ Montero Fenollós *et al.* 2011, fig. 11.

⁴⁷ Pfälzner 1995, pp. 106–114.

⁴⁸ Tenu *et al.* 2012, p. 148.

⁴⁹ Margueron 2004, p. 536.

⁵⁰ Margueron 2004; Tenu 2009: 187–190.

⁵¹ Kolinski 2001, p. 64.

⁵² Wilkinson 2000; Wossink 2009, pp. 65–100.

⁵³ For example, Algaze *et al.* 2012, pp. 31–33.

⁵⁴ Kolinski 2001, p. 30.

Undoubtedly the best documented *dunnu* is that of Tell Sabi Abyad.⁵⁵ At this site, the earliest Late Bronze Age occupation, level 7, dates to the Mittani period (Table 1). There was a large tower at the site during this period. Following a hiatus in occupation the site was redeveloped in level 6 into a fortified estate surrounded by a moat, of which the Mittani tower became a central building.

level	dates BC	period	main features
Levels 4 & 3 <i>hiatus</i>	ca. 1170–1150	Middle Assyrian	<i>dunnu</i> only partly in use
Level 5	1196–1183	Middle Assyrian	renovation of the <i>dunnu</i>
Level 6 <i>hiatus</i>	1233–1197	Middle Assyrian	construction of the <i>dunnu</i>
Level 7	ca. 1350–1250	Mittani	tower structure

Table 1. Summary of the Late Bronze Age and Early Iron Age stratigraphy of Tell Sabi Abyad.

Following level 7 the site was abandoned for some time, before it was redeveloped into a Middle Assyrian fortified estate in level 6 (Fig. 3). At the heart of the fortress stood the renovated Mittani tower of at least two stories high, flanked by an equally large residence on its west side. The estate was fortified by a perimeter wall measuring 60 × 60 m, and beyond this was a dry moat 80 × 80 m and several metres deep. Inside the *dunnu*, barrack-like buildings flanked the perimeter walls. In between these walls and the moat, various houses, workshops, and installations were subsequently constructed, and the moat seems to have gradually filled up.

The level 6 buildings show signs of decline, and around 1197 BC extensive renovations and redevelopments took place, which marks the start of level 5. At this stage the perimeter wall was reinforced, and houses and workshops located in the area directly outside the perimeter walls were levelled and in part relocated inside the fortifications (Fig. 4). The end of level 5 included substantial fires and destruction, resulting in the preservation of large quantities of artefacts in the *dunnu*. Further, the elite residence was used for grain storage and its toilet pavings were turned into threshing floors.

After 1180 BC, the character of the fortress changed drastically. Although levels 4 and 3 remain poorly understood, we seem to be dealing with a rather haphazard use and renovation of some domestic buildings, whereas other structures such as the elite residence and the tower fell into disuse and collapsed. Cuneiform tablets inform us that the *dunnu* was still part of the Assyrian administration albeit on a less significant scale than previously.

At Giricano, the other excavated *dunnu* settlement, it seems that we are dealing with a very different type of settlement. Schachner therefore argues that the institution of *dunnu* cannot be

⁵⁵ Akkermans 2006; Wiggermann 2000; Akkermans and Wiggermann in prep.

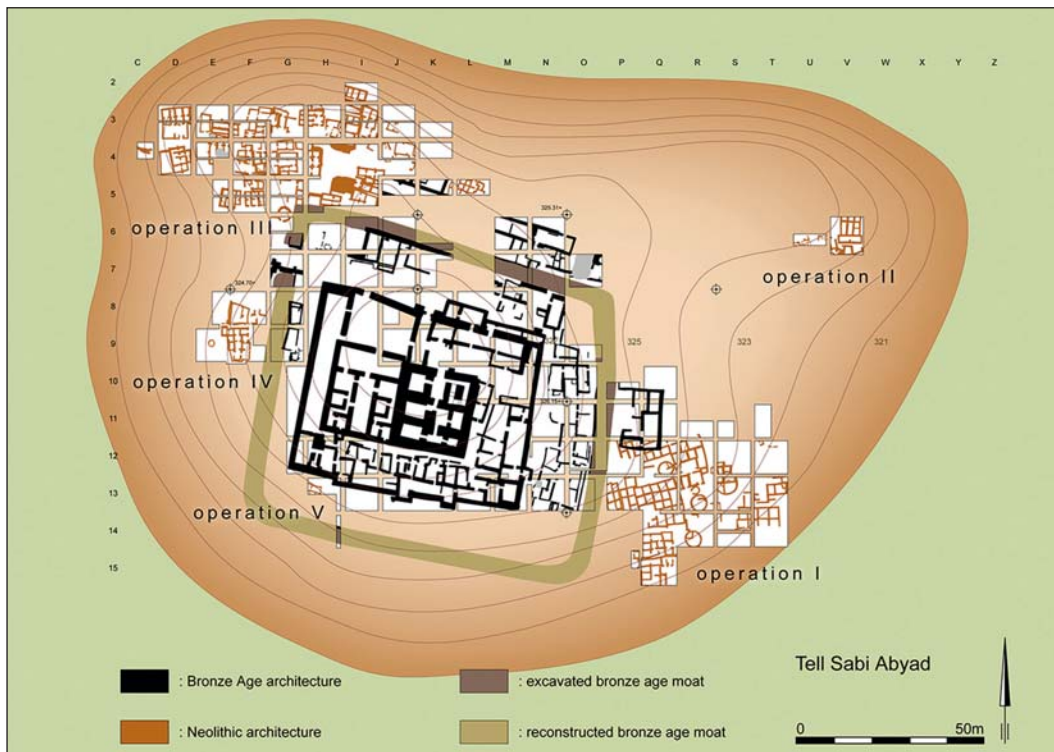


Fig. 3. The *dunnu* at Tell Sabi Abyad in level 6. Produced by Mikko Kriek.

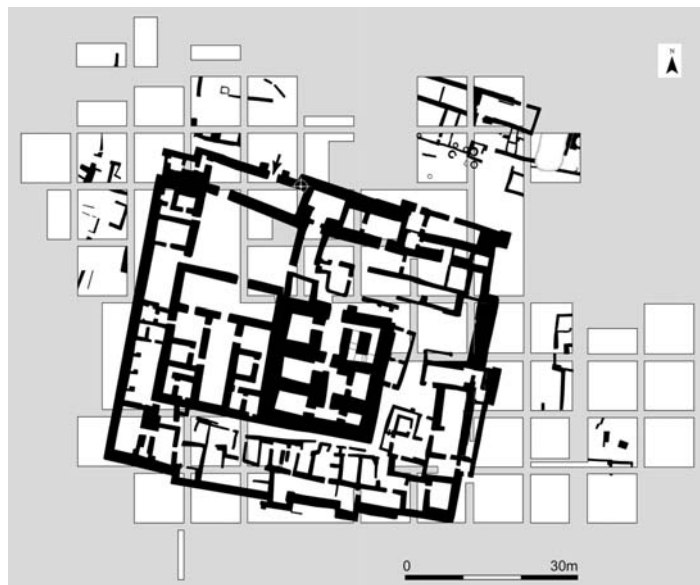


Fig. 4. The *dunnu* at Tell Sabi Abyad in level 5. Produced by Mikko Kriek.

equated with a specific type of building or settlement.⁵⁶ Relatively little has been published about the features and buildings dating to the Middle Assyrian period at Giricano however, apart from the cuneiform texts published by Radner.⁵⁷ In trenches one and six a number of walls were found but they were disturbed by various pits, and in consequence, little can be said about the nature of these buildings and no plan is available.

The conclusion that we are dealing with a completely different type of settlement at Giricano than at Tell Sabi Abyad, is not therefore unequivocal. The fact is that much of the settlement at Giricano has probably been lost to erosion. For example, the large pit feature “01:53”, that contains the jar with cuneiform tablets which comprise the Giricano archive, was dug from a no longer extant Middle Assyrian level.⁵⁸

Further, there are numerous similarities between both *dunnu* settlements. First, like at Tell Sabi Abyad, at Giricano there was a Mittani-period occupation prior to the establishment of the farming estate.⁵⁹ Second, at both settlements there are a remarkable number of finds and contexts that relate to crafts and industries in what are supposed to have been primarily agricultural settlements. For example, at Giricano a metallurgical mould and a crucible were found in the Middle Assyrian levels, suggesting that metal working took place at the site. Moreover, up to five different scribes were involved in the administration of the Giricano estate.⁶⁰ The same is true for Tell Sabi Abyad, excavated over a much larger area, where a large range of crafts and industries have been documented. They include pottery workshops and kilns,⁶¹ bread and beer production, bead manufacture, oil pressing, leather working, administration by scribes, and possibly metal working — as evidenced by a single mould. Further specialists present at the Tell Sabi Abyad *dunnu* on occasion included builders, perfume makers, hair dressers, singers, dress makers, merchants, gardeners, shepherds, “servants of the god Assur”, soldiers on patrol duties, and possibly prostitutes.⁶² Thus, at both *dunnus* there is evidence for crafts and industries, indicating that they were not only agricultural enterprises. Especially in the case of Tell Sabi Abyad, which supposedly was surrounded by a number of subsidiary settlements,⁶³ an interpretation as an, admittedly small, town is a feasible one.

On the basis of our current dataset, it would be impossible to define precise criteria for recognising *dunnu* estates in surveys or in excavations. Nonetheless, some general suggestions can be made. First, *dunnus* have been documented only in fertile regions where productive rain-fed agriculture is possible: for example, *dunnus* appear to be absent in the lower Khabur in the region close to Dûr-Katlimmu.⁶⁴ Second, *dunnus* occur in landscapes that were previously uncultivated, either because they were marginal or due to warfare and instability: for example, in the Balikh Valley there was a brief hiatus of occupation prior to the establishment of the *dunnu* at Tell Sabi

⁵⁶ Schachner 2004a, p. 536.

⁵⁷ Radner 2004.

⁵⁸ Schachner 2004b, pp. 9–13.

⁵⁹ Schachner 2004b, p. 9.

⁶⁰ Radner 2004, pp. 62–63.

⁶¹ Duistermaat 2008, pp. 339–421.

⁶² Wiggermann 2000, 2010; Akkermans and Wiggermann in press.

⁶³ Wiggermann 2000, p. 184.

⁶⁴ Cancik-Kirschbaum 1996.

Abyad and a series of *dunnus* further north in the valley,⁶⁵ whereas the *dunnus* in the Wadi Tharthar / Šiššar region were probably in a marginal, previously uncultivated landscape.⁶⁶ Third, some *dunnu* estates may have had a perimeter wall, but it is not clear whether or not this was universally the case, given the fact that only two identified *dunnus* have been excavated, one of which seems to have suffered from a substantial amount of erosion. Finally, from the extant evidence it appears that *dunnus* were not only farming settlements, but craft and industries were also practised in them.

The Function of Dunnus

That *dunnus* are agricultural estates that serve to produce agricultural surpluses for the benefit of an elite owner usually resident elsewhere has been well established.⁶⁷ Further, it has been suggested that *dunnus* were granted by the king to high officials to cover their expenses and that within these estates *ilku* duties, normally a corvée labour service for the king, could be used for the benefit of the estate.⁶⁸ However, this characterisation of the *dunnu* institution does not really resolve how these estates functioned.

Dunnus are not evenly spread across the Assyrian state: they occur in quite densely in some regions, but are less common in others. Thus, whereas they are documented in some numbers in the Balikh,⁶⁹ in the Upper Tigris,⁷⁰ in the Wadi Tharthar / Šiššar region,⁷¹ and around Tell Billa / Šibaniba,⁷² *dunnus* occur much less commonly in the Jazirah, with isolated *dunnus* near Tell Chuera and Tell Fecheriye,⁷³ and appear to be absent in the Lower Khabur. While the extant data are far from ideal, the pattern that they are not evenly spread across Middle Assyrian territories seems robust. In my mind, the distribution of *dunnus* can best be understood as resulting from the fact that in many regions suitable for agriculture little previously uncultivated land was available for establishing *dunnus*.

The uneven distribution of *dunnu* estates raises issues concerning their interpretation. In the course of the Middle Assyrian period all of the western territories were incorporated into the Assyrian provincial system.⁷⁴ If we assume the presence of high-ranking Assyrian officials throughout these provinces, it is clear that many of them would not have been able to obtain a *dunnu* within their own administrative territories. While these officials might have owned *dunnu* estates in other regions of the Assyrian state at some distance, this lack of proximity would have made such estates more difficult to manage and the estate proceeds would have been more difficult to use for covering their expenses. Here we can contrast, on the other hand, the case of the

⁶⁵ Lyon 2000; Wiggermann 2000.

⁶⁶ Postgate 1982.

⁶⁷ Wiggermann 2000; Radner 2004.

⁶⁸ Postgate 1982, pp. 310–312; Kolinski 2001, pp. 110–122.

⁶⁹ Cancik-Kirschbaum 1996; Wiggermann 2000.

⁷⁰ Radner 2004.

⁷¹ Postgate 1982.

⁷² Kolinski 2001, pp. 30–31.

⁷³ Wiggermann 2000, p. 173; Kolinski 2001, pp. 31–32; Jakob 2009.

⁷⁴ Postgate 1992; Jakob 2003; Tenu 2009; Caramelo 2012.

dunnu of Giricano, of whom the owner resided at nearby Tušhan, identified most plausibly as Ziyaret Tepe,⁷⁵ and the *dunnu* of Assur near Tell Fekheriye on the one hand, with the *dunnu* at Tell Sabi Abyad owned by the grandviziers of Assyria / kings of Hanigalbat: first Aššur-iddin, then Šulmanu-mušabši, and finally Ilī-padâ, all of whom were probably normally resident at their capital at Dûr-Katlimmu.

According to Wiggermann and Radner,⁷⁶ *dunnu* estates served first and foremost to generate agricultural surpluses. On the northwestern periphery of the Middle Assyrian Empire these estates were operating on a grand scale and creating huge surpluses. At Tell Sabi Abyad Wiggermann⁷⁷ has reconstructed this *dunnu* as a very large agricultural estate, comprising an estimated 3600 ha which were farmed by 100 free farmers and their families as well as the same number of unfree “šiluhlu”, farmers with families, and a maximum of *ca.* 60 staff. Of these postulated 900 people working for the *dunnu* only about 60 would have lived in the central settlement as excavated, and the farmers, both free and unfree, must have lived in various hamlets on the lands of the estate. The main crop produced at this *dunnu* was barley, of which a surplus of about 200 tons per annum was generated.⁷⁸ Other crops grown at Tell Sabi Abyad or mentioned in the archives include cress, and sesame, as well as small quantities of pistachio, lentils, onions, chick-peas, fennel, coriander, and cumin;⁷⁹ in addition wheat is known from botanical studies. At the same site the following animals are mentioned in the texts: cattle, sheep, mules and donkeys.⁸⁰ Faunal data also demonstrate the consumption of pigs and gazelle, neither of which occur in the text. Equid bones were also found in some quantities.⁸¹

At Giricano the main agricultural crop mentioned in the texts is again barley, and there is some mention of cattle as well.⁸² Faunal data from Giricano also includes pigs, red deer, and sheep as well as bovids.⁸³ According to Radner⁸⁴ the Giricano *dunnu* might have comprised some 900 ha and other *dunnus* in the Upper Tigris regions might have been even larger. Thus like at Tell Sabi Abyad, huge surpluses of especially barley were probably generated.

How were these surpluses put to use? The texts from Giricano discuss relatively modest amounts of barley, usually a few donkey-loads, being loaned out to various people, a debt which in some cases seems to have been redeemed in part through labour.⁸⁵ Presumably, other parts of the barley yield were shipped to the city residence of the owner, Ahuni living in Tušhan, who would have regularly visited his agricultural estate.

At Tell Sabi Abyad the situation is more complex, given that its owners, first Aššur-iddin, then Šulmanu-mušabši, and finally Ilī-padâ, were probably normally resident at Dûr-Katlimmu, which is some 170 km away as the crow flies. We know, however, that these officials travelled regularly

⁷⁵ Radner 2004, p. 71.

⁷⁶ Wiggermann 2000, p. 174; Radner 2004, p. 70.

⁷⁷ Wiggermann 2000.

⁷⁸ Wiggermann 2000, p. 195.

⁷⁹ Wiggermann 2000, p. 197.

⁸⁰ Wiggermann 2000, pp. 198–201.

⁸¹ Cavallo 2002.

⁸² Radner 2004.

⁸³ Berthon 2011, pp. 178–183.

⁸⁴ Radner 2004, p. 119.

⁸⁵ Radner 2004.

in their domains and had various residences within them. It is perhaps in this light that we should understand letters in which Ili-padâ requests a large amount of cress (T 93-6), clothes, and good linen for his bed (T 97-34).⁸⁶ None of these items, except for the cress, can be considered a prime product of the Tell Sabi Abyad *dunnu*. Instead, the *dunnu* seems to have functioned in part as a warehouse in which various goods were kept and in part as a workshop where other goods could be produced.

For what purposes then was the estimated surplus yield of 200.000 kg of barley from the Tell Sabi Abyad *dunnu* used? Certainly we cannot envision long-distance transportation of barley towards Dûr-Katlimmu or Assur, given the available overland transport technologies. Various studies exist that make it possible to estimate the cost of bulk transportation in pre-industrial technologies.⁸⁷ In the case of donkey caravans, in which each donkey could carry 50–80 kg and could cover about 20 km per day,⁸⁸ transport costs can be estimated at 4.8 kg per ton per kilometre.⁸⁹ This means that after about 70 km no less than a third of the yield would already have been consumed by transport costs, and after 208 km the entire crop is consumed. Given, that Dûr-Katlimmu is about 170 km from Tell Sabi Abyad as the crow flies, and Assur is no less than 380 km, it is clear that overland transport of barley would not have been an option except in emergency situations such as a famine, and in symbolic transports for offerings to the temple at Assur.⁹⁰

Thus, the barley yield of Tell Sabi Abyad *dunnu*, and other *dunnus* in the Balikh and Upper Tigris could not have been transported over large distances, unless it was along rivers, in which case transport costs were dramatically lowered.⁹¹ In the case of Tell Sabi Abyad this means that the yield of the barley harvest could only have been used only in the regional economy. Several such uses may be proposed, and they need not have excluded each other. First, the barley may have been destined for the upkeep of a residence of the owner somewhere in the region. Second, the barley might have been sold in a nearby city, in which case the crop was converted into valuables. Third, the barley may have been used to support dependant craft specialists who created products that could be sold or traded. Finally, the harvest yield could have been used to support the state apparatus, for instance by providing food to armies on the move. The second and third options are ways of converting bulk food into more transportable wealth, whereas the fourth would have benefitted the state rather than the owner.

What evidence can be mustered to evaluate these four possible uses of substantial barley harvest yields? The first thing that is evident is that there is no mention of barley transports in the Tell Sabi Abyad archives, although of course this does not mean that they did not occur. Evidence does exist, however, for some conversion of the surplus into more transportable wealth through craft activities, such as potting, oil pressing and perfume production, leather working and textile production,⁹² but all of these activities seem to have been relatively limited in scale. Likewise, texts about sending deliveries of clothes and sheets to a presumably nearby residence of

⁸⁶ Wiggermann 2000, pp. 173.

⁸⁷ Clark and Haswell 1967; Bairoch 1990.

⁸⁸ Faist 2001, p. 146.

⁸⁹ Bairoch 1990, p. 141; Algaze 2008, pp. 53–54.

⁹⁰ Postgate 1992; Wiggermann 2000, p. 196.

⁹¹ Algaze 2008, pp. 53–54.

⁹² Wiggermann 2000, p. 175; Duistermaat 2008; Akkermans and Wiggermann in press.

Ilī-padā do not suggest that this was the main function of the *dunnu*. The most convincing evidence suggests that much of the barley was spent feeding travelling army personnel and horses kept at the *dunnu*.⁹³ There is also tantalising evidence that mules might have been bred at the site.⁹⁴ Finally, in one letter Ilī-padā orders the delivery of no less than 100 homer of cress: a staggering 6200 kg, probably in the form of seeds. What purpose could such an amount possibly have had except for feeding a large army?

If this reconstruction of the Tell Sabi Abyad *dunnu* as mainly serving towards the upkeep of the administration and military apparatus of the Middle Assyrian Empire is accurate, it follows that this estate — and most likely also other large estates situated in frontier regions such as the Balikh Valley and the Upper Tigris — did not serve primarily as a means of compensating high ranking Assyrian officials for their private expenses, but mainly benefitted the state and the army. Kolinski's view concerning the *dunnus* of the Balikh that they served primarily a military function,⁹⁵ thus seems accurate.

At the same time, other *dunnu* estates, such as that of Giricano and those in the Tell Billah region, might have served primarily to cover the expenses of Assyrians living in nearby cities. Here it is relevant to stress that Tell Sabi Abyad was a very large and atypical *dunnu*. Postgate⁹⁶ reports on *dunnus* in the Assur area that are 10, 60, and 100 *ikū* in size, whereas Wiggermann⁹⁷ argues that the “royal” *dunnu* of Tell Sabi Abyad comprised no less than 10,000 *ikū*. An *ikū* is commonly equated with 3.6 ha, but this figure is extrapolated from Babylonian data and cannot be substantiated for Assyria.⁹⁸ Whatever the exact conversion figure, it is clear that the size of *dunnu* estates varied from fairly small farms up to very large operations such as the one at Tell Sabi Abyad.

The End of the Dunnu Institution

In the Neo-Assyrian period (900–605 BC) *dunnus* were no longer in existence, although the word still occurs as part of toponyms in southern Mesopotamia.⁹⁹ Radner argues that the disappearance of the *dunnu* was part of a broader change in Assyrian society in which the influence of the great houses so prominent in the Middle Assyrian period was diminished in the Neo-Assyrian period.¹⁰⁰ She further posits that landownership was no longer hereditary in the Neo-Assyrian period but linked to particular offices held temporarily by Assyrian officials. Likewise, Postgate¹⁰¹ has argued that there are clear differences between the administration of the Middle and Neo-Assyrian states. In a paper entitled “The invisible hierarchy” he argues that whereas in the Middle Assyrian period government was largely delegated to the major Assyrian houses,¹⁰² who mixed

⁹³ Wiggermann 2000, p. 196.

⁹⁴ Wiggermann 2000, p. 199; Cavallo 2002.

⁹⁵ Kolinski 2001, p. 32.

⁹⁶ Postgate 1982, pp. 308–311.

⁹⁷ Wiggermann 2000, p. 183.

⁹⁸ Van Driel 2000, p. 271; Reculeau 2011, p. 122.

⁹⁹ Kolinski 2001, pp. 32–35.

¹⁰⁰ Radner 2004, p. 70.

¹⁰¹ Postgate 2007.

¹⁰² Also Caramelo 2012, p. 139.

private and state business as a matter of course, in the Neo-Assyrian period the king assumed a much more central position and the military apparatus was used to create a state administration in which written bureaucracy became less important.

In concert, these scholars thus seem to suggest that in the Middle Assyrian period the great houses of Assyria played a key role in the administration of the state and that their *dunnu* estates could serve both private purposes and state/military functions, the two, in fact, not being clearly separated conceptually in the Middle Assyrian Period.

With these considerations in mind, let us return to the final occupation layers at Tell Sabi Abyad.¹⁰³ In 1182 BC Ninurta-apil-Ekur, the son of Ilī-padā, became king of Assyria, and simultaneously the position of grand vizier of Hanigalbat, previously occupied by his house, was abolished. It is probably not coincidental that the *dunnu* of Tell Sabi Abyad was thereafter neglected and its importance diminished, given that the primary concerns of its owner were in Assur. Thus, the *dunnu* at Tell Sabi Abyad was largely abandoned around 1180 BC, a process which included substantial conflagrations and the preservation of thousands of artefacts, as well as the conversion of the elite residence into a grain storage and processing space. Between 1170 and 1150 BC we are dealing with a rather haphazard use and renovation of some domestic buildings at the site, inside which some cuneiform tablets were found, informing us that the *dunnu* was still part of the Assyrian administration in some way.

One interpretation of this development could be that the Assyrian state, which like other large states in the ancient Near East faced difficulties during the crisis years commonly known as the Sea Peoples period,¹⁰⁴ decided to withdraw from the Balikh Valley and to concentrate its efforts on the more densely populated and fertile Habur region. In this light, the upkeep of the Balikh Valley *dunnus* including Tell Sabi Abyad — which had served mainly the military — would have lost its former importance.

Moreover, the abolishment of the function of grand vizier of Hanigalbat could be seen as a first step in the consolidation of power of the king brought about by undermining the hereditary resources and positions taken up by the major Assyrian houses. Obviously, the Assyrian king lacked the power to fully implement such policies until the advent of the Neo-Assyrian period, and this would have been the case especially in peripheral areas such as the Upper Tigris. Thus, many *dunnu* estates probably continued to thrive in the 12th and 11th centuries BC.

Discussion and Conclusion

The Middle Assyrian practice of creating (fortified) agricultural estates, often associated with deportation policies, is paralleled in many other imperial contexts. Tell Sabi Abyad is probably the oldest well documented example of such an agricultural estate. For example, in *Anabasis* VII.8 Xenophon describes a Persian fortified estate near Pergamon. He also discusses how the slaves fled the estate with the livestock, and how the defenders who remained ward off an attack by 300 Greeks from a perimeter wall eight stones thick.¹⁰⁵ Such estates were common throughout

¹⁰³ Akkermans 2006; Akkermans and Wiggermann in press.

¹⁰⁴ Oren 2000.

¹⁰⁵ Xenophon 2001.

the Achaemenid Empire and seem to have functioned in ways that are similar to the *dunnus* of the Middle Assyrian Empire: that is, partly as colonies, partly as strongholds, and in part to maintain the imperial infrastructure.¹⁰⁶ In the Americas the Wari and Inka empires provide evidence for colonies of agricultural estates that were often fortified.¹⁰⁷ Finally, the Carolingian manors in Europe can be mentioned as possible parallels.¹⁰⁸ The point here is not that all these agricultural estates are similar to each other, rather I want to raise the possibility that they might have fulfilled comparable functions in imperial states.

The *dunnus* of the Middle Assyrian Empire, then, might have been a culturally specific form of a type of institution found in many empires, all of which faced similar basic problems: how to control conquered territories, how to develop uncultivated lands with agricultural potential, and how to support the military and state apparatus. While, for example, the specific role of the Assyrian houses or great families in the Middle Assyrian period was no doubt culturally specific, the challenges faced by the Assyrian state following their conquest of new territories and the societies that occupied them were not.

It is proposed that the Middle Assyrian elites transformed an already existing institution, that of agricultural estates known as *dimtus* / *dunnus* — which were owned by important families and were located not far from their city residences, serving to generate resources to support those families into an institution that served primarily the state administration and military apparatus in the frontier zone of the empire. However, the older function of the *dunnu* as an estate benefiting the house that owned it was subsumed within the new functions, and some older *dunnus* continued to be used primarily in this manner. By the Neo-Assyrian period, new ways of supporting the state administration and military apparatus had been developed, and the institution of the *dunnu* is no longer in evidence.

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¹⁰⁶ Stolper 1985, p. 26; Kuhrt 2001, pp. 116–118.

¹⁰⁷ D’Altroy 2005; Schreiber 2005.

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Between the Written and Spoken: Dictation, Scribal Practice and Tablet Catalogues

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Abstract

This paper demonstrates the use of dictation in the creation of two Hittite tablets from the capital site of Hattuša. Parallel tablet lists, listing the same texts in the same order, are studied for the numerous orthographic and phrasal differences between them. The conclusion is that the lists were created independently of one another, and that they are not slavish copies of incipits or colophons, but rather contain different descriptive information for a number of entries. The most compelling explanation for these parallel lists and the many differences between them is that they were both created through dictation. A study of the proper nouns within these two lists, as well as across all the tablet catalogues, demonstrates that these words show a strong tendency towards variable orthographies. Unlike common nouns, which receive conventional spelling through scribal training, proper nouns show more variation. This range of spellings of proper nouns within the tablet catalogues is likely further evidence for dictation.

The role of the scribe in the creation of ancient texts in the Hittite kingdom is a topic that is integral to our understanding of our corpora.¹ The choice of material, the formation of the physical tablet, and the choice of signs are important characteristics of text creation. Of vital importance is the issue of text creation and transmission by Hittite scribes, but this is a topic that is difficult to accurately assess.² The texts are typically mute as to the method of their creation, and even phrases such as *issaz para*, “from the mouth”, are not necessarily to be taken verbatim.³ Basing his research on the work of Niditch,⁴ Jared Miller has claimed that ritual texts “were composed primarily by scribes exploiting the body of knowledge that they were able to recall from previous experience, at times also utilizing written sources.”⁵ While this conclusion seems justified for a significant number of ritual texts, Miller is quite correct to note it would be inaccurate to

¹ See, for example, the works of Waal 2010.

² Abbreviations follow *Chicago Hittite Dictionary*. I would like to thank Professor Theo van den Hout for his comments on early versions of this topic. I would also like to thank the blind reviewers for their very helpful suggestions. Of course any and all mistakes are the sole responsibility of the author.

³ See CHD P p. 118 sub *para* §2.b; HW² p. 48 sub *aiš/iš-* under the subsection on metaphorical uses (*issaz para* as “= nach Diktat”); Miller 2004, p. 474 n. 797. See also the conclusions of Worthington (2012, pp. 7–13) on dictation in Mesopotamia. His results are largely negative: not that dictation did not occur, but rather that it cannot be identified by orthography.

⁴ Niditch 1996, pp. 117–129.

⁵ Miller 2004, p. 476.

assume that the Hittites applied just one technique for the creation of texts. Rather than a monolithic practice, we must allow that “preserving via a written medium rites that stem essentially from an oral environment” was “a complex phenomenon.”⁶ This is not true only for rituals, but holds also for all text genres within the Hittite corpus. It is highly likely that the Hittite scribes subscribed to a multivalent approach to text creation/transmission.

In this work I would like to make a small contribution to the issue of text creation. Dictation is a process that requires a minimum of two people: one as transcriber and the other(s) as dictator(s)/speaker(s).⁷ It has been proposed that it is through this method that many rituals were created, but the evidence is not without its problems.⁸ The question that has not been satisfactorily answered is this: What, if any, diagnostic evidence exists to demonstrate that a text was created through dictation?⁹ It cannot be expected that directly copying a text by sight will result in a perfect recreation of the original document — mistakes do occur. Creating a text through dictation, however, is an entirely different method, one that is open to a wide variety of problems for the scribe. The transmission of textual material between two scribes requires the first to read then speak the texts (the two may be virtually instantaneous if the texts are read aloud). The second scribe must then listen, comprehend, and write. This will inevitably result in deviations from the source material.

In this study I will present evidence for what dictation looks like in two particular Hittite texts. It must be cautioned that the evidence for dictation that I will present here is specific to two parallel tablet lists. It cannot be assumed that the method for the creation of tablet lists by Hittite scribes was applicable to other text genres until a larger systematic study has been conducted. While tablet lists are to be considered tablets in single copies,¹⁰ that is to say, unique texts without duplicates, the presence of two sets of parallel tablet lists provides ideal material to study dictation. Each set represents two instances where the same, or rather very similar, groups of tablets were listed over an indeterminate amount of time. In order to test the results from this study, I have performed a modern experiment intended to mimic the processes of copying from sight and dictation (see appendix). The results of my study of the tablet lists will be compared with the results from my experiment in order to demonstrate that the differences between the ancient texts are the result of dictation.

⁶ Miller 2004, p. 477.

⁷ See Niditch 1996, pp. 117–119 and Miller’s overview (2004, pp. 469–470).

⁸ See, for example, Trémouille 2000, p. 81; Hutter 1991, pp. 42–43; Cornil 1999, p. 15; the problems with these preceding works are well stated by Miller (2004, pp. 472–481). A potential issue that arises, and one that will not be addressed here, is that of the problematics of ritual efficacy. If the scribes can create new (prescriptive) ritual texts by “exploiting the body of knowledge that they were able to recall ... at times also utilizing written sources” (*idem* p. 476), then we have to allow that the magician is taken out of the magic. That is to say, the scribes can be seen as rewriting the ritual material, manipulating it to fit new, if related, circumstances, but in doing so, how, if at all, did this affect the perceived efficacy of the magical practices? The present work on dictation is in many ways parallel to that of Houwink ten Cate (1968). In the present work I explore the relationship between two manuscripts by focusing on the differences between them, much as Houwink ten Cate has done previously on Muwatalli’s prayer (CTH 381). Because I am dealing with parallel rather than duplicate texts, I will be providing a much more detailed exploration of the documents.

⁹ See Worthington 2012, pp. 7–13; note especially his criticism of past treatments of the formula *ana pî* on pp. 10–12.

¹⁰ van den Hout 2006, p. 219.

This initial study is absolutely dependent upon the parallel nature of the tablet lists involved. The two lists catalogue virtually identical sets of texts from the Hittite archive,¹¹ and yet they display a number of significant differences. When comparing the entries between the lists, variations in spelling, sign choice and even phrasing quickly become apparent.¹² If these lists contain a virtually identical catalogue of texts, how do we explain these variances?¹³

The Catalogue Texts KUB 30.51+ and KBo 14.68+

It is first necessary to take a broader look at the tablet catalogues.¹⁴ There is little homogeneity among the tablet lists from Hattuša (Tafelkataloge, CTH 276-282) either in style or in content. There are six different ways in which tablet entries can be introduced in the tablet lists, although each list will be internally consistent.¹⁵ Various bits of information can be included in a text entry, such as the author and his/her vocation and/or location,¹⁶ a short description of the text, ranging from clauses¹⁷ to several sentences,¹⁸ and whether the tablet is complete (*QA-TT*) or incomplete (*UL QA-TT*). A list does not need to be internally consistent with the expression of these aforementioned three types of text information.¹⁹

Among the tablet lists, two pairs of texts stand out as exceptional by virtue of being two sets of parallel lists, while all other lists exist as unique manuscripts. These tablet lists are parallel versions, both written in New Hittite ductus,²⁰ and they are largely identical in regard to content, but with certain notable differences. One set, KBo 31.5+ and KBo 31.26,²¹ is poorly preserved. The

¹¹ In this paper I do not make any supposition as to the actual function(s) of these tablet catalogues. The term “catalogue” is used here very generally to indicate that the documents contain lists of texts that were grouped together for some purpose, whatever that purpose may have been. I therefore freely alternate between calling these texts “catalogues” and “lists”.

¹² The results of this study closely correspond to the work that Houwink ten Cate (1968; followed by Singer 1996, p. 141) has done on the relationship between KUB 6.45+ and KUB 6.46 (CTH 381), “Muwatalli’s Prayer to the Assembly of Gods”. He has convincingly demonstrated that KUB 6.46 was created first through dictation, while KUB 6.45+ was later copied directly from KUB 6.46.

¹³ This is not to say that the copying of one tablet would result in an identical text on the new tablet. Variants are almost certainly inevitable. What this study tries to demonstrate is that the variances between these parallel shelf lists are such that they cannot be explained by copying, but must have an alternative source — dictation.

¹⁴ For some interesting observations on the tablet lists see Christiansen 2008, pp. 302–307. The exact nature of the tablet lists is not entirely certain, including whether or not there was one purpose or multiple purposes for these documents.

¹⁵ These different introductions correspond to the different CTH numbers given to the lists: DUB.x.KAM (CTH 276), x *TUP-PU* (CTH 277), x DUB *UMMA/mān* (CTH 278), *mān*/INIM without DUB (CTH 279), DUB.x.BI (CTH 280), and DUB.x.KAM in a column on the left (CTH 281). As for the consistent use of a particular formula within a list, this holds with the exception of the occasional entries for IM.GÍD.DAs. Note, for example, the entries in KBo 31.8+: iv 17: DUB.1.KAM ... § 20 1 IM.GÍD.DA ... § 21 DUB.1.KAM ... § 25 1 IM.GÍD.DA ... (Dardano 2006, p. 28; on IM.GÍD.DAs see Waal 2010 sub §7.5.3).

¹⁶ See, for example, KBo 31.8+ i 3 INIM ¹*an-na-na* MUNUSŠU.GI “word of Annana, the ‘old woman,’” which is the second entry in this list. Every other preserved entry on column one of this text, with the exception of entry 10, omits this kind of information.

¹⁷ For example: KUB 30.51+ i 20’ *ma-a-an* MUNUSŠU.GI dU-an m[u-ga-iz-z]i “when the “old woman” e[voke]s the storm-god.”

¹⁸ For example: KUB 30.51+ ii 20’-28’; transliteration given below.

¹⁹ Note that in KUB 30.51+, an entry can omit the author, such as in i 20’, and the use of *QA-TT* is highly inconsistent.

²⁰ The issue of sign-shape variation within these two texts is addressed below.

²¹ These texts are treated by Dardano as II.f.A and II.f.B respectively (2006, pp. 161–178).

other set, KUB 30.51+ and KBo 14.68+, while also largely broken, preserves many more entries.²² As a result, much more information can be gleaned from this second set of parallel lists, making them the focus of this study. The two texts under study here are parallel texts and not parallel or duplicate manuscripts.²³ They contain largely identical content, but they were created independently from one another (although the ultimate relationship between the texts is impossible to determine). While the independent nature of these two texts must be maintained, due to the extremely similar nature of their content, I will treat them like parallel manuscripts: the better preserved will be called “text A” and the poorer, “text B” (see below).

The two versions are listed as CTH 277.4 (= x *TUP-PU*) and are grouped as follows:

- A. KUB 30.51 (+) KUB 30.45²⁴ + HSM 3644²⁵
- B. KBo 14.68 + KUB 30.58 + KUB 30.44 (+) KBo 7.74 + KBo 31.27

The two tablets each consist of four columns. The two lists cover much of the same material on the first two columns. Column three is completely missing from both texts, while column four is preserved only in A. A total of 40 entries are preserved to varying extents.

The two lists of this set differ as to their find spots (see tables 1 and 2). The fragments of List B were found in and around building A of Büyükkale, the main archive in the citadel, while those of List A were found in the vicinity of buildings B and C to the northwest of building A.²⁶ Despite the different locations, Güterbock claimed that the provenanced fragments of List A were simply “Streufunde aus Gebäude A”.²⁷ Based on their find spots, however, I believe that this conclusion is difficult to uphold. It must be cautioned that we do not know enough about the catalogues to make the assumption that they must have been from the same building. The fragment HSM 3644 of List A was purchased and is therefore unprovenanced.

²² Dardano (2006, pp. 126–155) as II.d.A and II.d.B; Laroche 1971, pp. 157–161.

²³ For an example of parallel manuscripts, see the “Ritual of Pupuwanni” (CTH 408). The texts here are also to be differentiated from parallel text recensions such as the Hittite laws.

²⁴ The handcopy must be emended from rev. iii and iv to obv. i and ii.

²⁵ The online Konkordanz from Mainz includes the fragment KBo 31.12 as part of List A. Line 7’-8’ would join HSM 3644 x+1-2, and would give some signs from the four paragraphs preceding HSM 3644. As such, KBo 31.12: 5’-6’ should be for the same entry as KBo 14.68+ ii x+1-2. This join is tantalising but there are some problems with it. Note that the signs of KBo 31.12: 7’-8’ are unusually large compared to the other lines of this text (photo collation: hethiter.net/:PhotArch No6963) and that these large signs are not represented in the handcopy of HSM 3644 provided by Güterbock (1965, p. 33). The first sign of KBo 31.12: 8’ is drawn as an A on the handcopy (not clear from photo), which would not be expected if it were to restore HSM 3644: 2’ (a KI sign is expected to complete the *ú-i-ú-i-š-* of HSM 3644: 2’). A further problem with this join is that the entry in KBo 31.12: 5’-6’ is very different from that of KBo 14.68+ ii x+1-2’. The latter reads: *ni-in]-ga-aš ni-ni-ik-z[i ... 2’ ... i-i]ia-at-tal-li ma-ab-ha-an mu-ga-x[*, while the former reads: *ḫaf]-ki-ia-aš mu-ga-a-u-aš x[... 6’ ...]dšUR-aš ni-ni-ik-z[i* (see Dardano 2006, p. 262). Although this could be an example of alternative phrasing between the two lists, based on the poor level of preservation of KBo 31.12, I feel that it is very difficult to include it, with certainty, as part of List A. For this reason it has been omitted from the present study. It must be noted, though, that KBo 31.12 was found in Building B, not far from the other two fragments of List A that have recorded find spots.

²⁶ van den Hout (2006, p. 284) states that KUB 30.51+ “was found in Bldg. C,” but given that the fragment KUB 30.45 was found in Building B I feel that we cannot make any absolute statements as to the tablets’ location.

²⁷ Güterbock 1991–1992, p. 134. Haas in his review of Dardano *StBoT* 47, takes the opposite view, taking KUB 30.51+ as coming from buildings B/C (2006, p. 437).

Two of the fragments of List B, KBo 31.27 and KUB 30.44, were found in room 5 of the archive building. Güterbock indicates that KUB 30.58 was found in room “2-4 Süd.”²⁸ According to the online Konkordanz, however, the fragment was found in the “[a]lter Grabungsschutt beim Geb. A in d. Südostecke d. Burg.”²⁹

Text A	Square	Building
KUB 30.51	q-r/16-17	C
KUB 30.45	r-14	B
HSM 3644	N/A	N/A

Table 1. Find spots of List A

Text B	Square	Building
KBo 14.68	u-v/11-12	courtyard west of Bldg. A
KUB 30.58	v-w/7-9	A
KUB 30.44	v-w/10	A room 5
KBo 7.74	N/A	N/A
KBo 31.27	v/w-10	A room 5

Table 2. Find spots of List B

The texts A and B, as far as they are preserved, are very similar in content and style. While the two lists differ in a number of ways, the organisational scheme is identical in both. In some cases, a new text “N” appears in List B but not in List A, such as B §I.9 (= i 6’-7’).³⁰ The presence of these additional entries makes it clear that one list could not have been copied from the other. Furthermore, they tell us that at some point between the creation of the lists, tablets were either removed or added to the collection.

The issue of the organisation of tablets based on the entries found in the various tablet lists is not easily explained. Some lists give the impression that the organisation of the tablet collections at Hattusa had little in common with modern conceptualisations. For example, the list KUB 30.42 + KBo 31.8 (CTH 276) is a mixture of entries concerning various religious matters and it even includes a treaty (iv 21’-24’). What to us appears to be a lack of organisation does not mean that the texts were not organised.³¹

²⁸ Güterbock 1991–1992, p. 134.

²⁹ S. Košak, hethiter.net/hetkonk (v. 1.84).

³⁰ In this paper I am adopting the convention of §I(I).X to indicate text entries (separated by horizontal lines on the tablet). For example, B §I.9 refers to the ninth paragraph of the first column of list B and A §II.9 to the ninth paragraph of the second column of list A. Given the poor state of preservation of the tablets, it is necessary to indicate the column number of each entry.

³¹ For some general observations on this, see Dardano 2006, pp. 10–12.

With that caveat in mind, the entries in Lists A and B display a high degree of cohesiveness in their content (table 3).³² Column one contains entries of texts specifically dealing with invoking (*mugai-*) and invocations (*mugawas* and *mukissar*). In the lists, these entries are commonly explicitly marked as belonging to this genre.

§	col. i	col. ii	col. iv
1	<i>mugawar</i>	<i>mugawar</i> ²	?
2	<i>mugawar</i> ²	birthing festivals (EZEN ₄ ŠUM-MA-[TE ^{MEŠ}] ³³ B ii 3')	?
3	<i>mugawar</i>	purification (of holy temple) (<i>nu kissan suppiyah</i> [<i>hanzi</i> ; A ii 6, B ii 7') ³⁴	?
4	?	purification (anger of king) (<i>mān Hattusi</i> LUGAL x TUKU.TUKU; A ii 7; B ii 8')	deals with troops (ÉRIN.MEŠ) and battle (ANA KUR LÚ.KÚR <i>zab-</i>)
5	<i>mugawar</i>	purification (eating impure meat) (<i>m</i>) <i>ān</i> UN- <i>aš</i> UL <i>suppiš</i> [followed by meats]; A ii 8'; B ii 9')	treating the “tongue” (<i>n=an lalas kissan a-n(i-)</i>)
6	<i>mugawar</i>	building a new temple (and purifying it?) (<i>mān É DINGIR-LIM GIBIL</i> <i>uedan</i> [<i>zi</i> ; A ii 11'; B ii 12')	4 rituals: 1 dealing with a hex (<i>alwanzahhi</i> [<i>skizi</i>]); 1 with death (<i>akkiškattari</i>); 1 with death in a city or field (<i>ÚŠ-kán</i>); 1 with death in army (ŠA KARA[Š] <i>ÚŠ-kán kisar</i> [<i>i</i>])
7	<i>mugawar</i>	deals with arguments and seeing evil dreams (<i>nasma=kan</i> DAM-SÚ x[...] <i>hallūškanz</i> [<i>i</i>] <i>nasma=za=kan</i> <i>idālamuš zā</i> [<i>himuš</i>] <i>uskanzi</i> ; A ii 15'-17'; B ii 16'-18')	deals with an enemy (LÚ.KÚR)
8	<i>mugawar</i>	when a “strong oath” [seizes] a man (<i>mān</i> UN- <i>an dassus</i> ¹ <i>lingai</i> [<i>s</i>] <i>ēpzi</i> ; A ii 18'; B ii 19'-20')	?
9	<i>mugawar</i>	deals with a series of calamities that can occur to a person (see transliteration below)	deals with the palace (INA É.GAL-LIM <i>še-er</i> x[])

³² These texts are conspicuously absent from the discussion of content in Dardano 2006, pp. 10–11.

³³ See Beckman 1983, pp. 222–223.

³⁴ This entry is the same as the entry in the shelf list KUB 30.42+ iv 19+23 (CTH 276.1) and the ritual ABoT 28+29 ii 17-22 (CTH 472). Based on KUB 30.42+ iv 19, it is likely that we are to restore a [1 IM.GÍD.DA] in KUB 30.51+ ii 3' (*pace* Dardano 2006, p. 128).

§	col. i	col. ii	col. iv
10	<i>mukisšar's</i>	? (<i>ma-a-an-za UN-aš na-[A ii 29'</i>)	4 rituals: 1 deals with making new houses (É.MEŠ GIBIL); 2 deal with blood (<i>ēšhar</i>)
11	<i>mukisšar</i>	—	Wise woman and the king and queen
12	2 “rituals”: 1 ritual concerning perjury and murder; 1 <i>mugawar</i>	—	(?) deals with ^d U, NIR.GÁL and Ištar of Nineveh
13	<i>mugawar</i>	—	—
14	<i>mugawar</i>	—	—
15	<i>mugawar</i>	—	—
16	<i>mugawar</i>	—	—
17	<i>mugawar</i>	—	—
18	?	—	—

Table 3: Content of KBo 30.51+ (List A) and KBo 14.68 (List B)

A couple of entries deserve a brief comment. In §I.10, an entry for a three-text *Sammeltafel*, List A simply identifies the texts as SÍSKUR.ĤI.A, “rituals” (i 11'). According to B, however, the texts are explicitly labelled as invocations (*muki*[ššar]^{HI.A}, i 8'). While the use of the Sumerogram SÍSKUR for *mukissar* is known,³⁵ the reading would be ambiguous without List B. The entry in §I.12 is composed in such a way as to lead us to believe that it may be for another *Sammeltafel*. The last line reads ŠÀ-BA 1-EN ^dU-aš *mu-ga-a-u-aš*, “contained within, one invocation of the Stormgod” (A i 19') and alternatively, 1 SÍSKUR *ma-a-an* ^dU-an *mu-ga-an-zi*, “1 ritual, when they invoke the Stormgod” (B i 18'). However in B, there is the addition of another ritual in i 15'-17'.³⁶ The scribe of B does not explicitly tie the ritual in lines i 15'-17' to the evocation of the Stormgod in i 18'. The ŠÀ-BA of List A (i 19') may indicate that rather than having two separate rituals, the ritual against perjury and murder that starts the entry may contain the invocation.³⁷ Since the tablets listed in the first column all concern invocations, this may perhaps be a note explaining why this ritual against perjury and murder was included.

The preserved section of column two of the other set of parallel catalogues, KBo 31.5+ and KBo 31.26, is also devoted to invocations. While in most cases we find the use of the verb *mugai-* (e.g., KBo 31.5+ ii 1, 2, 6, 7, 8, etc.), in some entries, the act of invoking is not explicit. Next to passages such as: 1 *TUP-P[U INI]M* ^f*ma-al-li-ri* ^{MUNUS}ŠU.GI *ma-a-an* ^dU-an *mu-ga-a-mi QA-TI* “1 tablet: the word of Mallī, the ‘old woman.’ When I evoke the Stormgod. Finished” (KBo 31.5+ ii 9), we find more oblique references to invocations such as: [x *TUP-PU ma-a-an*] D[INGIR.M]AĤ KASKAL-az *hu-it<-ti>-an-zi QA-TI* “[x tablet: when] they draw D[INGIR.M]AĤ

³⁵ Kammenhuber HW² p. 85a sub *anija-* I 2c.

³⁶ List B i 16'-17': 1 SÍSKUR *ma-a-an UN-aš UN-ši* [IGI-*anda* *lingan* *ha*]r²-z[r²] “1 ritual: when a man [h]a[s] perjured against] a man.”

³⁷ This is the position taken by Dardano (2006, p. 137).

from the road” (*ibid.*, ii 3). The act of drawing from the road (KASKAL-*az huittiya*-) is an act of invoking (or evoking) a deity.³⁸

The second column of A and B is concerned with situations requiring purification. These include the purification of a holy temple (§II.3),³⁹ and of a new temple (§II.6),⁴⁰ and even the ritual purification of a man who has eaten impure food products (§II.5).⁴¹ While purification is not specifically mentioned in most of these entries, they primarily deal with situations in which people have suffered from a variety of misfortunes. Such problems would require ritual cleansing to purify the afflicted person. The preserved section of this column culminates in a long, ten-line entry (most entries are only one to three lines long), covering a wide variety of problems that can befall a person (A §II.9). Unfortunately this entry is only found in A, and there only in part.

The common link between the ritual texts of the fourth column, only preserved in List A, is more difficult to discern. Certain entries are for texts dealing with military matters (§IV.4, .6, .7).⁴² We also find one text dealing with issues of the palace (§IV.9)⁴³ and one involving a MUNUSŠU.GI and the king and queen (§IV.11).⁴⁴ The column is so fragmentary that it is extremely difficult to determine how these texts are related. The most likely connection between them is issues of purity/impurity.

In table 3, I give the genres of each entry found in Lists A and B. Since the lists are virtually identical as to content, and since the layout of List B appears to mirror that of List A (that is, the entries of column i of A are also on column i of B), I have omitted reference to the particular lists. I prefer to treat them here as a whole. The vertical columns represent each column of text, with column three omitted since it is not preserved on either list. A question mark, “?”, is used if nothing certain can be said about a particular entry due to its lack of preservation.

We can make some assumptions concerning these parallel tablet catalogues. It is possible that List A (KUB 30.51+) was created from one collection of tablets, while List B (KBo 14.68+) was created from an almost identical collection that existed separately from that of List A.⁴⁵ These

³⁸ In *ibid.* 4, we find DÙ-*an-zi* “they treat”, which is given as *mu-ga*[-*a-an-zi* “they evoke” in the parallel (KBo 31.26 obv. 1). The use of *mugai*- provides more specific information than the very general *tja*- “to treat (a god).”

³⁹ A ii 3'-6'; B ii 5'-7'.

⁴⁰ A ii 11'-13'; B ii 12'-14'.

⁴¹ A ii 8'-10'; B ii 9'-11'.

⁴² §IV.4 (A iv 7'-8'): *ma-a-an-kán ÉRIN.MEŠ ... na-at A-NA KUR LÚ.KÚR za-ab*[- “when the troops ... they/ them to/for the enemy ba[ttle ...”: (for possible restorations see Dardano 2006, pp. 132–133).

§IV.6 (A iv 12'-16'): [1-EN] *ma-a-an-kán ŠA KARA[Š] ÚŠ-kán ki-ša-r[i]* “[one (ritual):] when death occurs within the troops” (iv 15'-16'). Dardano (2006, p. 132) does not restore a 1-EN at the end of line iv 15', but it is very likely there. The entry is for four rituals (4 ŠÍŠKUR *a-ni-ia-an* “4 rituals contained therein”, iv 12'). The first ritual begins with a *ma-a*[-*an*], but the third ritual (iv 14'-15'), the only other ritual for which the beginning is preserved, starts with a 1-EN. As such, we should likely restore a 1-EN in the breaks at the end of iv 13' and 15'.

§IV.7 (A iv 17'-18'): *ma-a-an* [...] *ku-e-da-ni-ik-ki LÚ.KÚR KAL.G[A-i]š-zi* “when ... in some [x] the enemy is growing stronger”; see Dardano 2006, p. 132.

⁴³ §IV.9 (A iv 23'): *ma-a-an I-NA É.GAL-LIM še-er x*[- “when up in the palace ...”; for possible restoration, see Dardano 2006, p. 134 with p. 148 n. 25.

⁴⁴ §IV.11 (A iv 27'): *ma-a-an-kán* MUNUSŠU.GI LUGAL MUNUS.LUGAL [...] “when the ‘old woman’ [...] the king (and) queen”; Dardano 2006, p. 134.

⁴⁵ van den Hout (2005, p. 285) writes that an “inventory does not necessarily match the order on the place where tablets are kept.” There is indeed no way to determine if the lists faithfully represent how the tablets were arranged in storage, or if they reflect some other kind of ordering strategy. That tablets appear in List B and not in List A indicates that new tablets were either added to or subtracted from the larger group represented by these lists. If they represent

two collections of tablets would have instances of spelling and phrasing differences which would be reflected in the lists. In this scenario we must also assume that the tablets in both collections were in the same exact order with the exception that the second collection, that of List B, contained extra tablets. That multiple copies of the same texts existed contemporaneously in the Hittite citadel Büyükkale is certain, but we are unable to ascertain if entire collections of tablets were stored in multiple locations, let alone in the same exact order.⁴⁶

A simpler scenario is to assume that we are dealing with one set of tablets over a period of time. The presence of extra texts in List B is an artefact of the temporal distance between the creation of the lists, but the consistency in the order of shared texts would indicate that the collection as a whole was not disturbed. The additional entries in List B indicate tablets that were either added after List A was compiled or were a part of the original collection (as represented by List B) and were pulled before List A was written. That the shared texts of the lists appear in the same order is due to them not being in use at the time. If it holds that Lists A and B were created from one group of texts, then we must determine why there are so many differences between them. The two lists were certainly created by a visual examination of the tablets contained within them, the issue is how this creation occurred, through visual copying or dictation. As will be shown below the differences between the lists can clearly be attributed to dictation. These results are validated by the experiment that I include in the appendix.

Differences Between the Lists

There are a number of orthographic differences between the two lists. The majority of examples involve the addition/omission of one or more signs. These alternations in spelling do not affect the reading of the texts. In some examples, spelling variation involves the presence/absence of morphological elements, such as enclitic *=kan*: §I.10 *ma-a-an-kán* (A i 12') and *ma-a-an* (B i 9');⁴⁷ or enclitic pronoun *=an*: §I.12 *nam-ma-kán* (A i 18') and *nam-ma-an-kán* (B i 16').⁴⁸ Orthographic differences can also be found in the use of ideograms in place of syllabic spellings

new tablets in a list that does not reflect actual storage order, then why were they slotted into what appear to be random places? If List B was compiled first, however, the extraneous tablets in List B that are not in List A can be reasonably assumed to have been removed before the compilation of List A. In this situation it is not the placement of these tablets within List B that is noteworthy, but rather their absence in List A.

⁴⁶ If Lists A and B were created from two identical collections of tablets stored in different buildings, then we must assume that the collections were maintained in the exact same order, without having any discernible method for maintaining this order outside of the lists. If these were living collections that were actively consulted by scribes, then if a tablet was pulled, how was it known to where exactly to return it? Can we even assume that maintaining the exact order of tablets, as would be done in a modern library, was important to the tablet collection?

⁴⁷ The differences between A and B here stem from the inclusion of the dative/locative UN-*ši* in List A. The verb *sāi-* with an indirect object appears typically to require a local particle *=kan* or *=san* (see KBo 51.18a + KUB 24.3 ii 1). There are two occurrences of *sāi-* as a participle without an indirect object or local particle (KBo 17.32+ obv. 10' and KBo 54.73:11'), but most such uses require a *=za* (cf. KUB 15.32 i 46; KUB 17.10 i 22; KUB 33.10 ii 6; KUB 33.24(?): 39; KUB 33.67: 26; but see also KUB 36.89 obv. 12 (*=za=kan*)). See CHD § pp. 13–15 sub *šā(y)e- šāi-*.

⁴⁸ The difference between *nam-ma-kán* (A i 18') and *nam-ma-an-kán* (B i 16') may not simply be due to scribal omission. According to Yakubovich (2009, pp. 318–321), in New Hittite, the dropping of an *n* before an obstruent such as *k*, can be attributed to increased nasalisation. Written forms with *n* may actually represent a standardised form representative of convention and not phonetics (I am grateful to the reviewer of this article for this suggestion and reference).

(e.g., §II.7 *i-da-a-l[a-* (A ii 16') and H]UL-*la-mu-uš* (B ii 17')) or Akkadographic ones (e.g., INIM (A i 7', 8') and *A-WA-AT* (B i 2', 3')).

Other differences can be categorised as lexical or phrasal. We find one example of alternate verbiage: §I.7 *an-ni-i[a-mi* (A i 9') and *mu-ga-[a-mi* (B i 4');⁴⁹ one example of different person is also present: §II.6 GUL-*ab-zi* (third person singular; A ii 13') and *wa-al-h]a-an-zi* (third person plural; B ii 14'). More noticeable are differences at the level of phrases. These can be subcategorised as omissions/additions, whereby a phrase is present in the text entry of one list but not in the other, and alternative phrasing, whereby the text for the entry of one list is different from that of the other.

1. *Spelling*:

I. syllabic:⁵⁰

§	A (= KUB 30.51+)	B (+ KBo 14.68+)
I.7	^f <i>al-la-i-tu-r[a-</i> (i 8')	^f <i>al-la-i-tu-u-ra-hi</i> (i 3')
I.8	^d <i>ak-ni-ia-aš</i> (i 10') ⁵¹	<i>ak-ni-ia-aš</i> (i 5')
	<i>mu-ga-a-[</i> (i 10')	<i>mu-ga-u-wa-aš</i> (i 5')

⁴⁹ The use of the different verbs here is intriguing. It could be that the tablet in the collection had been modified between the creation of lists A and B. What I feel is more likely is that we have here a paraphrasing *ad sensum* in list A (see below, and especially the appendix). The original had either the more general *aniyami* or the more specific *mugami*, and the scribe creating either list A or B reanalysed the phrase and supplied the alternative verb. It is most likely that the more specific *mugami* was original and *aniyami* functions as a more general verb supplied by the scribe (e.g., he hears “I evoke” and reformulates this mentally as “I treat” of perhaps better taking *aniya-* as “to perform a ritual action”).

⁵⁰ Note the following differences in the other parallel tablet catalogues KBo 31.5+++ (A) and KBo 31.26 (B):

1. *zi-kán-zi* (A ii 5) vs. *z[i]-ik-kán-zi* (B obv. 2)
2. ^d*ú-li-li-aš-ši-in* (A ii 6) vs. ^d*ú-l[i-l]i-ia-aš-ši-in* (B obv. 3)
3. ^f*a]n-na* (A ii 7) vs. ^f*an-na-a* (B obv. 4)
4. ^{URU}*ir-ha-a-aš-ša* (A ii 7) vs. ^{URU}*ir-ha-aš-ša* (B obv. 4)
5. ^f*an-ni-ú-ia-ni* (A ii 11) vs. ^f*an-ni-ú-i-ia-ni* (B obv. 8)
6. *pè-e-di* (A ii 12) vs. *pè-di* (B obv. 9)
7. ^f*ha-ra-ap-ši-i-li* (A ii 13) vs. ^f*ha-ra-ap-še-li* (B obv. 10)
8. ^f*hu-un-ta-ri-it-ta-a* (A iv 7') vs. ^f*hu-un-ta-ri-it-ta* (B rev. 3')
9. *na-aš-ma-an-kán* (A iv 8') vs. *na-a]š-ma-aš-kán* (B rev. 4')

⁵¹ I have decided to include instances of the presence/absence of determinatives and switching of gender as spelling mistakes as opposed to including them as separate categories. While a determinative would not be present in the actual pronunciation of a word, it is an expected element in the writing of various word classes and therefore represents an element of spelling. As such I do not expect that there needs to be a one-to-one correspondence between spelling conventions and actual pronunciation. This is akin to the convention of spelling proper nouns with an initial capital letter or, to use a modern example, to say a webpage as “www dot ...” which should actually be written as “http://www...” (although this is now less common as “http://” no longer needs to be written as it once did). Although a speaker would never say the masculine or feminine determinative when uttering a personal name, the spelling convention within the Hittite scribal tradition is to spell each name with an initial determinative marking this gender. Furthermore, if tablet lists were created through dictation, as I am arguing here, can we truly assume to know how a scribe dictating from a tablet to a colleague from the same tradition(!) recreated the written as an oral utterance? Between scribes, determinatives are meaningful elements of a word and therefore we cannot assume that they would always be omitted in acts of dictation.

§	A (= KUB 30.51+)	B (+ KBo 14.68+)
I.10 ⁵²	<i>ma-a-an-kán</i> (i 12')	<i>ma-a-an</i> (i 9')
	<i>1-EN</i> (i 13')	<i>1</i> (i 9')
	<i>wa-aš-ta-i</i> (i 14')	<i>wa-aš-ta-a-</i> (i 10')
I.12(a-b)	^m <i>a-aš-ta-pí-LUGAL</i> (i 17')	^m <i>aš-ta-pí-LUGAL</i> (i 14')
	<i>nam-ma-kán</i> (i 18') ⁵³	<i>nam-ma-an-kán</i> (i 16')
I.14	^d U (i 21')	<d>U (i 20')
	URU <i>zi-ip-pa-l[a-</i> (i 21')	URU <i>zi-ip-la-an-da</i> (i 20')
II.2	<i>ú-i-ú-i-</i> (ii 2')	<i>ú-i-ú]-e-eš-ki-u-wa-aš</i> (ii 4')
II.3	^m <i>am-m[i-</i> (ii 3') ⁵⁴	^f <i>am-mi-ḫa-at-na</i> (ii 5')
	<i>ki]-iš-ša-an</i> (ii 6')	<i>kiš-an</i> (ii 7')
II.7	<i>ḫal-lu-ú-i-iš-kán<-zi></i> (ii 16')	<i>ḫal-lu-u-e-eš-kán-z[i</i> (ii 17')
II.9	<i>na-aš-m[a-aš-ši-kán</i> (ii 25')	<i>na-aš-ma-ši-kán</i> (ii 27')
	<i>na-aš-ma-aš-ši-i]š-ša-an</i> (ii 26')	<i>na-aš-ma-aš-ši-ša^l</i> (text: <i>ta</i>)- <i>an</i> (ii 28')

Table 4: Syllabic spelling differences between Lists A and B

II. Ideograms

§	A	B
I.6	INIM (i 7')	<i>A-WA-AT</i> (i 2')
I.7	INIM (i 8')	<i>A-WA-AT</i> (i 3')
I.10	SÍSKUR.ḪI.A (i 11')	<i>mu-ki-</i> (i 8')
	^d šar- (i 12')	<d>LUGAL- <i>ma-aš</i> (i 9')
II.3	<i>A-WA-AT</i> (ii 3')	INI]M (ii 5')
II.7	<i>i-da-a-l[a-</i> (ii 16')	Ḫ]UL- <i>la-mu-uš</i> (ii 17')

Table 5: Spelling differences involving ideograms between Lists A and B

⁵² In A i 12' we find *ma-a-an-kán* and in B i 9' simply *ma-a-an*. This is not, however, a spelling difference but rather a syntactic difference; see above.

⁵³ The difference here is in the inclusion (List A) and omission (List B) of the enclitic pronoun =*an*=. Since the form occurs in the same exact phrase in both lists (*nam-ma-AN-kán ú-iz-zi*), I take its omission here as a spelling error rather than a difference due to syntax or phrasing.

⁵⁴ The switching of genders is rare but not unknown. Note the following individuals: ^fḪantitaššu (called LÚ URU *ḫu-wr-ma* KBo 11.14 iv 24'); ^{m/f}Watti(ti) (male determinative with MUNUS URU *ku-na-aš-šar-wa* KUB 30.48 obv. 7 versus female determinative with following MUNUS KUB 30.49 iv 21); ^fKuwatalla (as ^m*ku-wa-tal-la* KUB 30.55 rev. 8); ^fPupuwanni (as LÚ MUŠEN.DÙ LÚ KUR URU [IBoT 2.115++ obv. 1); ^mAmmiḫatma (with female determinative in List B (KBo 7.74++ ii 5) and KBo 31.25 i 8'); ^mPuriyanni (masculine determinative over possible MUNUS in KUB 7.14 i 1; male determinative in KBo 29.1 iv 3' and KUB 35.57 i 1; female determinative in KBo 31.6 iii 7). For more information on these names, see Miller 2004, pp. 488–492, esp. nn. 834, 837, 843, 851, 858, 865, 879.

2. *Word choice*I. alternative word forms⁵⁵

§	A	B
I.7 ⁵⁶	<i>an-ni-i[a-</i> (i 9')	<i>mu-ga-[</i> (i 4')

Table 6: Alternative words between Lists A and B

II. morpho-syntactic differences

§	A	B
I.10 ⁵⁷	<i>ma-a-an-kán</i> (i 12')	<i>ma-a-an</i> (i 9')
II.6	<i>GUL-ah-zi</i> (ii 13')	<i>wa-al-h]a-an-zi</i> (ii 14')

Table 7: Morpho-syntactic differences between Lists A and B

3. *Phrases*

I. additions/omissions (additions are underlined; alternate phrasing/spelling in bold)

§I.10 A 11' 1 *ṬUP-PU nu-uš-ša-an* 3 SÍSKUR.HI.A [*a-ni-ia-a*]*n* 1-EN
 A 12' *ma-a-an-kán UN-ši* ^d*hé-bat* ^d*šar*⁵⁸ [*ru-ma-aš* ^d*a*]*l-la-an-zu-uš-ša*
 A 13' *ša-a-an-te-eš*⁵⁹ 1-EN SÍSKUR *ma-a-an-k[án* KUR' *an-da*²² *ha*]*r-ra-a-an*⁶⁰
 A 14' 1-EN SÍSKUR *ma-a-an ták-na-aš* ^dUTU-i *k[u-iš pé-ra-an]* *wa-aš-ta-i* QA-TI
 B 8' 1 *ṬUP-PU nu-uš-ša-an* 3 *mu-ki-i[š-šar*^{HI.A} *a-ni-ia-an*⁶¹ 1 SÍSKUR⁶²
 B 9' *ma-a-an* ^d*hé-bat* ^{<d>}LUGAL-*ma-aš* ^d*a*[*l-la-an-zu-uš-ša* *ša-a-an-te-eš*]
 B 10' 1 SÍSKUR *ma-a-an-kán* KUR-e *an-[da* ...
 B 11' *ku-iš pé-ra-an wa-aš-ta-a-[i*

“One tablet, three invoke[ions]⁶³ are [recorded there]on. First: When *Ḫebat*, *Šarruma*, and *Allanzu* are angry (at a person). One ritual: When the land is [spoil]ed, (and) one ritual: When somebody sins before the Sun Goddess of the earth. Complete.”

⁵⁵ Note the following difference in the other parallel tablet catalogues KBo 31.5+++ (A) and KBo 31.26 (B): DÜ-*an-zi* (A ii 4) vs. *mu-ga-[* (B obv. 1).

⁵⁶ According to HW² p. 85, sub *anija-* this is the only occurrence of *mugai-* and *aniya-* used in parallel phrases. Kammenhuber chooses to not translate the *mugai-*, reading the passage as “Ihn (einen Menschen) behandle ich folgendermaßen (mit einem Rit.).”

⁵⁷ Also listed above under spelling differences

⁵⁸ Laroche (1971, p. 157) reads as LUGAL, likely based on List B (i 9').

⁵⁹ Laroche (1971, p. 158) omits *-a*.

⁶⁰ Dardano (2006, p. 126) does not offer a restoration, preferring to give o o]*x-ra-a-an*.

⁶¹ The restoration of *a-ni-ia-an* is purely conjecture here, as it could also have been written ideographically.

⁶² The restoration of SÍSKUR is probable (see Dardano 2006, p. 149) but not certain. In List A, the three texts of the *Sammeltafel* are introduced by 1-EN (A i 11') and 1-EN SÍSKUR (A i 13', 14'). In List B, only the introduction of the second text as 1 SÍSKUR (B i 10') is preserved. Based on List A, we can assume that the third ritual of B was likely introduced by a 1 SÍSKUR as well. The first text would have been introduced by either simply 1, following the 1-EN of List A, or by 1 SÍSKUR.

⁶³ I am translating SÍSKUR as equivalent to *mukiar* here.

- §I.12 A 17' 1 *ṬUP-PU* INIM ^m*aš-ta-pí-LUGAL ma-a-an UN-aš U[N-ši me-n]a-ab-ḥa-an<-da>*⁶⁴
 A 18' *li-in-ga-an ḥar-zi nam-ma-kán ú-iz-zi [ku-e]n-zi nu-uš-ši ki-i SÍSKUR*
 A 19' *ŠĀ-BA 1-EN dU-aš mu-ga-a-u-aš [QA-TI]*
 B 14' 1 *ṬUP-PU* INIM ^m*aš-ta-pí-LUGAL* ^L_[Ú_x URU GN]⁶⁵
 B 15' 1 *SÍSKUR ma-a-an UN-aš UN-ši [IGI²-an²-da²⁶⁶ lī²-in²-ga²-an² ḥa]r²-z[i²]*
 B 16' *nam-ma-an-kán ú-iz-zi ku-[en-zi nu a-p]a-a-at e-eš-ḥar*
 B 17' *a-pé-e-da-ni UN-ši na-a[k-ke-eš-z]i nu-uš-ši ki-i SISK[UR]*
 B 18' 1 *SÍSKUR ma-a-an dU-an mu-ga-an-zi*

A: “One tablet: The word of Āštabi-šarri. When a man perjures [ag]ainst [another] m[an], and then proceeds to [ki]ll him. Therein one (ritual) of the invocation of the Storm God. [C]omplete”

B: “One tablet: The word of Aštabi-šarri, the [x of the city of x]. One ritual: when a man ha[s perjured against] a man, and then he proceeds to ki[ll] him, [and th]at blood be[comes troubles] ome to that man, this is the ritu[al] for him. One ritual: When they invoke the Storm God.”

- §I.13 A 20' 1 *ṬUP-PU ma-a-an* ^{MUNUS}ŠU.GI ^dU-an m[u-ga-iz-z]i
 B 19' 1 *ṬUP-PU ŠUM-MI* ^{MU}_{[NUS}ŠU.GI N]U.GÁL *ma-a-an* ^{MUNUS}ŠU.GI ^dU-an mu-ga-iz-zi

A: “One tablet: When the ‘old woman’ inv[oke]s the Storm God.”

B: “One tablet: The name of the [‘old woman’ i]s not (known). When the ‘old woman’ invokes the Storm God.”

- §II.8 A 18' 1 *ṬUP-PU ma-a-an UN-an da-aš-šu-uš¹* (text: -un) *li-in-ga-i-[iš e-ep-zi QA-TI]*
 B 19' 1 *ṬUP-PU INIM* ^{md}_{30-LÚ} ^{LÚ}MU[ŠEN.DÜ]⁶⁷ ...
 B 20' *e-ep-zi na-an k[i-*

A: “One tablet: When the strong oath [seizes] a man. [Complete.]”

B: “One tablet: The word of Arma-ziti the au[gurer...] [...] seizes. It a[s follows]⁶⁸”

II. Differences across entire entry (no restorations attempted)⁶⁹

- §II.9 A 19' 3 *ṬUP-PU* INIM ^m*i-ia-ri-nu* ^{LÚ} ^{URU}*ḥar-šum-na ma-a-a[n*
 A 20' *na-aš-ma-aš-kán an-da pa-ap-ra-an-ni ku-wa-at-qa a[n²]*⁷⁰
 A 21' *MU.ḪI¹.A-ŠU ni-ni-in-kán-te-eš na-aš-ma-aš-kán A-NA [*
 A 22' *me-mi-iš-kán-za na-aš-ma-za-kán i-da-a-lu-mu-un [*

⁶⁴ Laroche (1971, p. 158) incorrectly reads as *p[a-ap-r]a-ab-ḥa-an*; see CHD P p. 103 sub *paprahḥ-* d.

⁶⁵ Given the length of the break, I prefer to see here a title, preceded by the masculine determinative LÚ, and a place name.

⁶⁶ Based on the available space, I prefer a restoration of *IGI-an-da* to the *me-na-ab-ḥa-an-da* given in List A (*pace* Dardano 2006, p. 150).

⁶⁷ Dardano (2006, p. 152) prefers to read ^{LÚ}D[UB.SAR based on the appearance of an Armaziti (written logographically as ^{md}_{30-LÚ}, where ^d₃₀ = the moon god Arma and LÚ = Luvian *ziti* “man”) in the catalogue KUB 30.54 ii 8'. The traces at the end of B ii 19' do not, in my opinion, look like the DUB (*ṬUP*) at the beginning of the line. There appears to be an initial horizontal immediately followed by a short vertical stroke that bisects the horizontal line. This could be read as ḪU for ^{LÚ}MU[ŠEN.DÜ. An Armaziti as augur is well known (see Imparati 1988, pp. 79–94; van den Hout 1998, pp. 70–71; Archi 1975, p. 133 (sub ^dMI.LÚ)).

⁶⁸ If this is to be restored as *kissan*.

⁶⁹ I avoid adding restorations here in order not to bias the text towards any particular reading.

⁷⁰ Restored by Dardano (2006, p. 130) as *t[i²-ia-an-za na-aš-ma-aš-ši]*; Laroche (1971, p. 160) just reads as *x [*.

- A 23' *na-aš-ma li-in-kán ħar-zi na-aš-ma-an A-BU A[MA(-)*
 A 24' *PA-NI DINGIR.MEŠ ħur-ta-an ħar-kán-zi na-aš-ma-an* ^{MUNUS}NA[P-
 A 25' [*na-aš-m*] *a-aš-ši-kán*⁷¹ ^{MUNUS}NAP-*ṬAR-TÙ ku-iš-ki pa-ap-ra-tar an*[-
 A 26' [*-i*] *š-a-an DINGIR-LUM ku¹-iš-ki ša-a-an-za*⁷² *n[a-*
 A 27' [*G*] *IG-an za-lu-kiš-zi na-aš-ma-aš* ^x⁷³ [
 A 28' [*TUG*] *ši-ik-nu-uš ša-ra-a pí-ip-p[a-*
 B 21' 3 *ṬUP-PU* (erasure) *INIM* ^m*i-ia-ri-nu ma*[-*a-an*
 B 22' *pa-ap-ra-an-ni ku-e-da-ni-i*[*k-ki*
 B 23' *ni-ni-in-kán-te-eš na-aš-ma-aš-k*[*án*²
 B 24' *na-aš-ma-za-kán i-da-la-mu-uš* *z[a-*
 B 25' *ħar-zi na-aš-ma-an A-BU* [
 B 26' *ku-iš-ki ħur-ta-an ħar-z*[*i*
 B 27' *na-aš-ma-ši-kán* ^{MUNUS}NAP-[-
 B 28' *na-aš-ma-aš-ši-ša*¹ (text: *ta*)-*an* [
 B 29' *x-pi-it-ti*

A: “Three tablets: The word of Iyarinu, the man of Ḥaršumna [...] or in some uncleanliness [*he is placed*, or] his years are disturbed, or he is speaking [evil] to [the god(s)], or [he sees] evil [dreams], or he has sworn (falsely), or (his) father and (his) mother have cursed him, or the *na[ptartu]*–woman has x’ed] him, [o]r some *naptartu*–woman [has brought] defilement into his(=šš) house, [or] some god is angry at him, o[r] sickness is prolonged [for him], or he [...] [they] turn up the robes”

B: “Three tablets: The word of Iyarinu, w[hen ...] in som[e] uncleanliness, [...] are disturbed, or he [...], or evil d[reams ...], or ... swo[rn]⁷⁴ (falsely), or (his) father [...] (or) someone has cursed him, [or ...], or the *nap[tartu]*–woman [...] to him/his, or [...] to him ...”

The number of differences (discrepancies?) between the two parallel lists is conspicuous. It must be kept in mind that the two lists actually display little overlap due to poor preservation.⁷⁵ Approximately 20 per cent of the preserved material shows orthographic variation between the

⁷¹ Even though the restorations are quite certain, since they are restored I will not place them in bold here. It is unlikely that the scribe made an error in these instances but I do not want to privilege the data in any way.

⁷² Laroche (1971, p. 160) reads as *DINGIR-LUM-ma iš-ki-ša-an-za*.

⁷³ Laroche (1971, p. 160) as *ú*[-].

⁷⁴ Only the *ħarzi* of *lingan ħarzi* is preserved.

⁷⁵ Overlap between A and B by paragraph (partially preserved are differentiated from fully preserved in both lists; total count of words given in parentheses): §I.5: 2 partial (2); §I.6 2 partial, 3 full (5); §I.7: 2 partial, 5 full (7); §I. 8 1 partial, 3 full (4); §I.10: 5 partial, 8 full (13); §I.11: 2 partial, 7 full (9); §I.13: 1 partial, 5 full (6); §I.14: 2 partial, 2 full (4); §I.15: 3 partial, 2 full (5); §I.16 3 partial, 4 full (5); §II.2: 1 partial (1); §II.3: 5 partial (5); §II.4: 1 partial, 2 full (3); §II.5: 3 partial, 7 full (10); §II.6: 5 partial, 4 full (9); §II.7: 6 partial, 5 full (11); §II.9: 7 partial, 12 full (19). Note that those paragraphs in which more overlap occurs (x > 5) are those containing more than two lines (§I.10: 4 lines(A/B); §II.5: 3 lines(A/B); §II.6: 3 lines (A/B); §II.7: 4 lines(A/B); §II.9: 10 lines(A), 8 lines (B)). There are three exceptions: §I.7; §I.11; §I.13. In §I.11, we have five fully preserved single sign words shared (1, INIM, ŠA, Ū, ŠA) and two two-sign ones (*ṬUP-PU*, ^dUTU); in §I.13 a similar situation holds, where the preserved shared words are of one (1), two (*ṬUP-PU*), and three (*ma-a-an*, ^{MUNUS}ŠU.GI, ^dU-an) signs. §I.7 is just unusually well preserved. There are 118 partially and fully preserved words shared between the two lists (and this includes several partially preserved words that are so broken that no comparison can be made as to spelling), and 22 spelling variations (above as group 1.I-II). This means that 19 per cent of the shared words, or one out of five, show variant spelling/writing. This includes single sign words such as numbers, ŠA, etc. Of the barely preserved shared words, I would classify four as certainly identical but seven are so broken that we cannot determine spelling variations. If we remove these seven, we would have 111 shared forms, for 20 per cent of forms with variations.

two lists, and this number does not take into account variation in phrasing. I believe that the most compelling data comes from the spelling of personal names (PNs)/divine names (DNs)/geographic names (GNs) in the lists. Dictation requires the scribe to process spoken (dictated) material prior to writing it down. While the spelling of many words is learned by rote during scribal training, proper nouns represent a class of word forms that, I would argue, have less canonical spellings, as they are not emphasised during scribal training. This argument is upheld by the experiment included in the appendix. Before examining the proper nouns, however, I will turn to orthographic variation among non-proper nouns.

Between the lists of the other set, there are seven variations in the spelling of words and a further five variations that alternate between logographic(=“Sumerographic”)/Akkadographic/syllabic spelling. Among the first group, we can identify four main types of variation: 1) plene/non-plene and geminate/non-geminate; 2) alternative signs (including variation in vocalic signs); 3) omitted signs; and 4) presence/absence of enclitics. There are four of the first group (*mu-ga(-a)*-§I.8; *wa-aš-ta(-a)*-§I.10; *na-aš-ma(-aš)-ši-kán* §II.9; *na-aš-ma-aš-ši(-iš)-ša-an* §II.9),⁷⁶ three of the second group (*ú-i/e-ú-i/e-* §II.2; *ki-iš-ša-an* v. *kiš-an* §II.3; *ḫal-lu-ú/u-i/e-iš/eš-kán-zi* §II.9), two of the third group (*1(-EN)* §I.10; *ḫal-lu-ú/u-i/e-iš/eš-kán(-zi)* §II.9 — final sign omitted in A), and two of the fourth group (*mān(=kan)* §I.10; *namma(=an)=kan* §I.12).⁷⁷ The final group is, at least in some cases, the result of alternative phrasing, as the presence/absence of enclitic elements can be due to syntactic requirements.⁷⁸ It is difficult to determine the significance of the variations.

I believe that the variations in the spelling of proper names (personal, divine, and geographic) are more telling. These proper nouns show a number of variations in spelling. It should be noted, however, that two forms, ^d*Hebat* (^d*ḫe-pát* §I.10) and ^{URU}*Ḫalap* display a considerable amount of consistency in spelling across Hittite texts, including both spellings of ^{URU}*Ḫalap* as *Ḫalpa* and *Ḫalap*.⁷⁹ With the exception of these two names, there are nine further proper nouns that are preserved well enough in both lists to be compared.⁸⁰ Of these, only one, ^m*i-ia-ri-nu* (§II.9 = A ii 19'/B ii 21') is spelled the same in both lists (there are three occurrences of proper names spelled with logograms⁸¹). The spelling variation of the remaining five can be seen above under

⁷⁶ This may better fit under the category of omission of signs. The enclitic particle =*san* and pronoun =*si* are typically written geminate, and the single writing is atypical (see CHD Š p. 129 sub -*šan* and p. 321 sub -*še*, -*ši*).

⁷⁷ The other parallel set of lists, KBo 31.5+++ (=A) and KBo 31.26 (=B) show three variants of nouns. There are two of the first type (*zi(-ik)-kán-zi* (A ii 5/B obv. 2); *pè(-e)-di* (A ii 12/B obv. 9)) and one example of different enclitic elements: *na-aš-ma-an/aš-kán* (A iv 8'/B rev. 4').

⁷⁸ See n. 47 above.

⁷⁹ Both of these proper names appear primarily in the stem form (although conjugated forms are known). For *Ḫebat*, the vast majority of her name is in the form ^d*ḫe-bat* (or: -*pát*) (van Gessel 1998, pp. 115–119). Showing more variation, *Ḫalap/Ḫalpa* is typically either ^{URU}*hal-pa* or ^{URU}*ḫa-la-ap*, with the latter being in the majority (RGTC 6, pp. 71–72).

⁸⁰ Too broken for comparison are the forms: ^d*a*[-*la-an-zu-uš-ša* and ^d*a*[- (A i 12', B i 9' = §I.10); ^f*ma-al-li-id-du-un-n[a* and ^f*ma-al-li-* (A i 15', B i 12' = §I.11); ^m*e-al-ḫU-up* and ^m*e-* (A ii 14', B ii 15' = §I.7). Given that for each of these proper nouns a minimum of four signs are missing, we cannot assume that both lists have identical spellings.

⁸¹ Two of these involve the Storm god: ^d*U-aš* and ^d*U-an* (A i 19', B i 18' = §I.12); ^d*U* and ^d*U* (A i 21', B i 20' = §I.14). The differences between the forms in §I.12 are not due to spelling error, but rather the different grammatical endings reflect a variation in phrases between the lists that requires a nominative in List A and an accusative in List B. The other logographic spelling is ^{URU}*KÜ.BABBAR-ši* (A ii 7', B ii 8' = §II.4).

the error type 1.I. Of these remaining five, it is interesting to note that the name ^f*Allaiturahi* occurs twice in List A, once as ^f*al-la-i-tu-r[a-hi]* (i 18') and once as ^f*al-i-tu-ra-a-hi* (iv 9').⁸² We find a similar result in the other set of parallel lists (KBo 31.5+ and KBo 31.26). There are eight proper nouns shared between the lists. Two show no variation (^f*ma-al-li-i* (KBo 31.5+ ii 9; KBo 31.26 obv. 6) and ^d*wa-al-li-ia-ra-an* (KBo 31.5+ ii 10; KBo 31.26 obv. 7)), while the remaining six do show variation.⁸³

What we find between these two sets of parallel lists is a lack of consistency in the writing of proper nouns. This can be best summarized in the following table (the numbers are taken from note 75 above):

	non-proper	proper	total
variation	15	7	22 (18%)
no variation	95	3	98 (82%)
total	110	10	120 (100%)

Table 8: Spelling variations between Lists A and B

When one looks at the tablet catalogues as a whole (CTH 276-282), this variability in the spelling of proper nouns appears to hold. It must be cautioned that the quality of the information obtained from treating CTH 276-282 as a unit is not comparable to that attainable from the parallel shelf lists. Not only were the catalogues as a whole created over a period of time, it is also unlikely that they were all created for the same reason. Given the quantity of unknowns linking the various text catalogues, the results are not as secure as one would like. Regardless, they are compelling and support the evidence found in the parallel lists concerning the spelling of proper nouns. Why proper nouns should show such deviation is unclear, but I believe, as suggested above, that it may reflect scribal training: common nouns and verbs are taught in such a way as to limit the number of orthographic variants, while proper nouns, given their lesser frequency of occurrence in the corpus, have not received regularised spellings based on repetitive copying by students.

In the following pages, I present the results of a survey of proper nouns based on the indices in Dardano.⁸⁴ Those proper nouns that are represented exclusively by logograms are not included. The exceptions are those proper nouns that are comprised of a logographic element and phonetic complements beyond case endings; note, for example, the name ^r^d₁ŠUR-*aš* (KBo 31.12: 6') vs. ^dŠUR-*ga-aš* (KUB 30.55 rev.² 6'). I will examine in turn the following three classes: Class I: Personal Names (PNs); Class II: Divine Names (DNs); and Class III: Geographic Names (GNs).

⁸² This spelling is not noted in Laroche 1966, p. 25.

⁸³ See n. 50, numbers 2, 3, 4, 5, 7, and 8.

⁸⁴ Dardano 2006, pp. 353–366.

Class I: Personal Names

There are 84 PNs found within the tablet catalogues. Of these, however, there are 23 that appear multiple times. Of these 23 16 display different spellings, three display the same spelling, two are likely the same spelling (evidence points to their being the same, but they are too broken to be certain), and two are too broken.

Different		69.6%
Same	certain	13%
	likely	8.7%
Broken		8.7%

Table 9: Personal names in the tablet catalogues

The following chart breaks down those PNs with variant spelling:⁸⁵

Personal names	# of diff. spellings/ citations	Spellings	
^f <i>Allaituraḥi</i> ⁸⁶ (NH 20)	3/4	^f <i>al-i-tu-ra-a-ḥi</i>	KUB 30.51+ iv 9'
		^f <i>al-la-i-tu-u-ra-ḥi</i>	KBo 14.68+ i 3'
		^f <i>al-la-i-tu-ra-ḥi</i>	KUB 30.51+ i 8' KBo 31.20 x+1
^m <i>Ammiḥatna</i> ⁸⁷ (NH 50)	3[+?]/[?]/4[+?]/[?] ⁸⁸	^f <i>am-mi-ḥa-at-na</i>	KBo 14.68+ ii 5' KUB 30.47+ i 8'
		^m <i>am-mi-ḥa-at-na</i>	KUB 30.51+ ii 3'
		^m <i>am-mi-ḥa-na</i>	KBo 31.4+ v 7'
^f <i>Anna</i> (NH 58)	2/3	^f <i>an-na-a</i>	KBo 31.26 obv. 4 KBo 31.6 iii 16'
		^a <i>n-ṛan-na</i>	KBo 31.5+ ii 7

⁸⁵ The following personal names show no preserved variation: *Iyarinu* (^m*i-ia-ri-nu* KUB 30.51+ ii 19; KBo 31.27' + ii 2'); *Malli* (^f*ma-al-li-i* KBo 31.5+ ii 9; KBo 31.26 obv. 6); ^f*NÍG.GA.GUŠKIN* (KBo 31.6 iii 4', 11'); ^m*SIN-LÚ* (KBo 31.27+ ii 19; KUB 30.54 ii 8'); *Tulpiya* (^m*tíl-pi-ia* KBo 31.8+ iv 26'; KUB 30.63 v² 2', 12'; two other occurrences too broken – KBo 31.4+ v 2' and KBo 31.27+ ii 5'). Belonging to this group is perhaps also *Ulippi* (^m*ú-li-ip-pi* KUB 8.71 rev. 4; KUB 30.64 rev. 2'; -[^f]*ri-ip-pi* KUB 8.71 left edge 17').

⁸⁶ In the *Allaituraḥi* texts published in ChS I/5 (Haas and Wegner 1988, pp. 48–207), the name is spelled either ^f*al-la-i-du-ra-ḥi* (e.g. KUB 24.13 = ChS I/5 15 iv 2') or ^f*al-la-i-du-ra-aḥ-ḥi* (e.g. KUB 41.21 = ChS I/5 25 iv 16'). In all examples that preserve the dental, it is written with the DU sign (KUB 52.107 = ChS I/5 9 left edge 1; KUB 51.19 = ChS I/5 14 iv 16; KBo 12.85+ = ChS I/5 19 iv 23). The geminate *-ḥḥ-* is only preserved in KUB 41.21 iv 16'. On *Allaituraḥi*, see also de Martino 2011, p. 66.

⁸⁷ *Ammiḥatna* displays a remarkable degree of stability outside of the catalogues. The spelling ^m*am-mi-ḥa-at-na* is found in CTH 471 (KBo 5.2 i 1, iv 63), CTH 472 (KBo 23.1 ii 23; ABoT 28+ ii 17), and CTH 473 (KBo 27.130 i 1, KBo 7.59 i 1). Note that we have the partially preserved *-m*ⁱ*-ḥa-at-na* (KUB 7.53 obv. 1 (CTH 473)) and *-a*ⁱ*t-na* (KBo 23.1 iv 38 (CTH 472)).

⁸⁸ The [+?]/[?] indicates that a number of examples are broken and may hide different spellings.

Personal names	# of diff. spellings/ citations	Spellings	
^f <i>Annanna</i> ⁸⁹ (NH 62)	2[+?]/[?] ⁹⁰	^f <i>an-na-na</i>	KBo 31.8+ i 3 <i>ibid.</i> iv 12
		^f <i>an-na-an-na</i>	KUB 30.51+ i 22' KBo 31.1+ iii 8' <i>ibid.</i> iii 12' KBo 31.25+ iv 17'
^f <i>Anniwiyani</i> ⁹¹ (NH 78)	2/2	^f <i>an-ni-ú-i-ia-ni</i>	KBo 31.5+ ii 11
] <i>an-ni-ú-i-ia-ni</i>	KBo 31.26 obv. 8
^m <i>Aštabi-šarri</i> (NH 178)	2/2	^m <i>a-aš-ta-bi-LUGAL</i>	KUB 30.51+ i 17'
		^m <i>aš-ta-bi-LUGAL</i>	KBo 31.27+ i 14'
^f <i>Azzari</i> ⁹² (NH 216)	2/3	^f <i>a-az-za-ri</i>	KUB 30.51+ iv 17 KBo 31.8+ i 8
		^f <i>a-za-a-ri</i>	Bo 3203 obv. 19'
^f <i>Harapšili</i> ⁹³ (NH 297)	2/2	^f <i>ha-ra-ap-ši-i-li</i>	KBo 31.5+ ii 13
		^f <i>ha-ra-ap-še-li</i>	KBo 31.26 obv. 10
^m <i>Hattušili</i> (NH 349)	2/2	...-a] <i>t-tu-ši-li</i>	KBo 31.1+ iii 2'
		GID]RU-DINGIR- <i>LIM</i>	KBo 31.4+ vi y+1
^f <i>Huntaritta</i> (NH 398)	2/2	^f <i>hu-un-ta-ri-it-ta-a</i>	KBo 31.5+ iv 7'
		^f <i>hu-un-ta-ri-it-ta</i>	KBo 31.26 rev. 3' ⁹⁴
^m <i>Huwarlu</i> ⁹⁵	2?/3	^m <i>hu-u-wa-a[r-l]u-ú</i>	KBo 31.4+ v 18'
		...]- <i>wa-ar-lu</i>	KBo 31.10 x+1
		^m <i>hu-u-wa-[-</i>	KBo 22.102 rev. 6'
^f <i>Mallidunna</i> ⁹⁶ (NH 729)	2[+?]/[?]	^f <i>ma-al-li-id-du-un-na</i>	KUB 30.51+ i 15'
		^m <i>a-al-li-du-un-[-</i>	KBo 31.8+ iii 12' KBo 31.5+ iv 4'
^f <i>Maštigga</i> ⁹⁷ (NH 782)	2/2	^f <i>ma-a[š-ti-i]k-ka</i>	KUB 8.70(+) ii 10'
		^m <i>a-aš-ti-ig-ga</i>	KBo 31.6 iii 19'

⁸⁹ Outside of the catalogues, see ^f*an-na-an-na-aš* (VBoT 58 iv 3).

⁹⁰ It is likely that the majority of spellings are ^f*an-na-an-na*.

⁹¹ In VBoT 24(CTH 393) we have ^f*a-an-ni-ú-i-ia-ni* in i 1 of the incipit, but ^f*a-an-ni-wi-ia-ni* in iv 32 of the colophon.

⁹² See de Martino 2011, pp. 75–76.

⁹³ In preserved examples outside of the catalogues, the ŠI sign is used instead of the ŠE (KUB 11.8+ ii 3; 1307/z ii² 3), although in many examples, this sign is lost (e.g., KBo 3.1+ i 31; KUB 11.11+ 6'; KBo 38.155: 4'; KBo 38.218: 13').

⁹⁴ Marked incorrectly as text II.d.B (for II.f.B) in Dardano 2006, p. 359.

⁹⁵ Name not given in NH.

⁹⁶ In the three examples outside of the shelf lists, there is a preference for single *-du-* (KBo 41.6 rev. 14'; KUB 33.70 iii 6; KBo 7.58 rev. 2').

⁹⁷ See the forms in Miller 2004, p. 208.

Personal names	# of diff. spellings/ citations	Spellings	
^m <i>Mati</i> ⁹⁸ (NH 789)	2[+?]/[?]	^m <i>ma-a-ti</i>	KBo 31.8+ iv 26
		^m <i>ma-a-ti-i</i>	KBo 31.4+ v 22 KBo 31.27+ ii 5'
^m <i>Palliya</i> ⁹⁹ (NH 915)	2/2	^m <i>pal-li-ia-aš</i>	KBo 31.25+ i 12'
		^m <i>pal-li-i-ia-aš</i>	KUB 30.63 iii 3
^m <i>Papanikri</i> ¹⁰⁰ (NH 933)	2[+?]/[?]	^m <i>pa-a-pa-ni-ik-ki</i>	KBo 31.4+ v 23'
		^m <i>pa-a-pa-ni-ik-ri</i>	KUB 8.71 obv. x+1

Table 10: Personal names showing variant spelling in the tablet catalogues

Class II: Divine Names

There are 26 total DNs found within the catalogues, with only nine occurring in multiple texts (this excludes those DNs represented solely by a logogram or by a logogram+case ending). Four of the names display variant spellings, while three display consistent spelling. This latter group includes *Hebat*, which is spelled very consistently throughout the Hittite corpus.¹⁰¹ There are two examples which are too broken to compare.¹⁰²

Different	44.4%
Same	33.3%
Broken	22.2%

Table 11: Divine names in the tablet catalogues

The following list is for those DNs with variant spelling (excluding *Hebat*, *Telipinu*, *Walliyara* for whom no variant spellings exist):

⁹⁸ Outside of catalogues, see ^m*ma-a-ti-i* (ABOT 28+ ii 18; KBo 23.1 ii 24) and perhaps ^m*ma-a-ti-i-ia*² (KUB 9.2 i 1). See de Martino 2011, p. 68.

⁹⁹ See ^m*pal-li-ia-aš* (KBo 9.115+ obv. 1 (CTH 475)).

¹⁰⁰ See ^m*pa-a-pa-ni-ik-ri* (KBo 5.1 iv 41 (CTH 476)). See de Martino 2011, p. 69.

¹⁰¹ Also in this group are *Telipinu* and *Walliyara*-. The latter is attested only within the catalogues. *Telipinu* (van Gessel 1998, pp. 466–478) is a very common DN, but despite its numerous appearances, it is typically written as a standard ^d*te-li-pi-nu/ni*, with the final sign depending upon case. Three variants are known: ^d*te-e-li-pi-nu* (KBo 45.129+ i 8); ^d*te-li-nu-un* (scribal omission of *-pi-*, KUB 25.23 iv 4); and ^d*te-le-e-pi-nu(-)* (KUB 43.28 iii 11). *Walliyara* occurs twice as ^d*wa-al-li-ia-ra-an* in KBo 31.5+ ii 10 and KBo 31.26 obv. 7, which are the other set of parallel lists (van Gessel 1998, p. 549).

¹⁰² The results here match Houwink ten Cate's conclusions concerning KUB 6.45+ and KUB 6.46 (1968). There are 43 divine names mentioned. This number excludes those DNs solely represented by logograms; only those logographic names with phonetic accompaniment are included. It also combines ^d*Šarruma* with *Hebat-Šarruma*. Out of the 43 names, 13, or 30 per cent, show variant spelling.

Divine names	# of diff. spellings/ citations		
^d <i>Akni</i> ¹⁰³	2/2	^d <i>ak-ni-ia-aš</i>	KUB 30.51+ i 10'
		<i>ak-ni-ia-aš</i>	KBo 31.27+ i 5'
^d <i>Šarruma</i> ¹⁰⁴	2/2	^d <i>šar-</i> [KUB 30.51 i 12'
		^d LUGAL- <i>ma-aš</i>	KBo 31.27+ i 9'
^d ŠUR	2/2	^d ŠUR- <i>aš</i>	KBo 31.12: 6'
		^d ŠUR- <i>ga-aš</i>	KUB 30.55 rev.: 6'
^d <i>Uliiašši</i> ¹⁰⁵	2/2	^d <i>ú-li-li-aš-ši-in</i>	KBo 31.5+ ii 6
		^d <i>ú-l[i-l]i-ia-aš-ši-in</i>	KBo 31.26 obv. 3

Table 12: Divine names showing variant spelling in the tablet catalogues

Class III: Geographic Names

There are 55 total geographic names preserved in the catalogues, with 22 of them occurring multiple times. Of this group, 14 show variant spelling, two are the same, while a further four are likely the same.¹⁰⁶ Two more examples are too broken to determine.¹⁰⁷

Different		64%
Same	certain	9%
	likely	18%
Broken		9%

Table 13: Geographic names in the tablet catalogues

¹⁰³ See van Gessel 1998, p. 8. Spellings of this DN outside of the catalogues occur with either an initial plene *a-ak-* (e.g., KUB 8.28 obv. 16', rev. 7'; KBo 11.14 ii 21) or with just the *ak-* (e.g., VBoT 119: 5'; KBo 13.147 right col. 11).

¹⁰⁴ See van Gessel 1998, pp. 376–382. The majority of spellings are as LUGAL-*ma*(+case ending), but one example of LUGAL-*um-ma*, KUB 51.67: 11, is known. When spelled syllabically, there is an alternation between geminate and non-geminate *-m(m)-*.

¹⁰⁵ van Gessel 1998, pp. 534–535.

¹⁰⁶ Of those that display consistent spelling, we have Kummanni (^{URU}*kum-ma-an-ni* (6 occurrences)) and Turmitta (^{URU}*túr-mi-it-ta* (3 occurrences)). The GNs Hatti, Hattuši, Ištanuwa, and Kulilla are too broken to make a secure conclusion, but they appear all to be written the same.

¹⁰⁷ Note that the results here are in line with those from Houwink ten Cate's study on KUB 6.45+ and KUB 6.46 (1968). Between the two texts, and in some instances within the same text, there are 79 geographic names attested. Of these, 23 display variant writings (for list of GNs see the glossary in Singer 1996, pp. 114–117). This equates to 29 per cent of all geographic names in these texts. As for those GNs that occur more than once within KUB 6.46, the text which Houwink ten Cate correctly identifies as being created from dictation, we find 17 total GNs, with ten showing variant writing and seven not. It is interesting to note that the location of these GNs in the text does not appear to have any influence on spelling. Of the seven that are written identically, all occur either multiple times on the same line or in consecutive lines. Of the ten that show variant writing, six are on consecutive lines and two occur within four lines of each other. This means that even if the same GN is heard in quick succession there is a slightly greater chance that the scribe will have written it differently the second time.

The following chart breaks down the 14 GNs with variant spellings.

Geographic names	# of diff. spellings/ citations		
URU <i>Arinna</i> ¹⁰⁸	2[+?]/[?]	URU <i>pu-na-za</i>	KBo 31.19 i 4' KBo 47.6 rev. 4
		URU <i>a-ri-in-na</i>	KUB 30.43 iii 13' KUB 30.60+ left col. 25' KBo 31.1+ iii 13'
URU <i>Arzauwa</i> ¹⁰⁹	2[+?]/[?]	URU <i>ar-za-u-wa</i>	KBo 31.6 iii 14'
		URU <i>ar'-za'-u-i-ia</i>	KBo 10.6 i 3
URU <i>Halpa</i> ¹¹⁰	2/4	URU <i>hal-pa</i>	KUB 30.56 iii 10
		URU <i>ha-la-ap</i>	KUB 30.51+ ii 14 KBo 31.27+ ii 15' KUB 30.56 iii 22
URU <i>Hurma</i> ¹¹¹	2/3	URU <i>hu-ur-ma</i>	KBo 31.11 i 3'
		URU <i>hur-ma</i>	KUB 8.69 iii 10, 11
URU <i>Irhašša</i> ¹¹²	2/2	URU <i>ir-ḫa-a-aš-ša</i>	KBo 31.5+ ii 7
		URU <i>ir-ḫa-aš-ša</i>	KBo 31.26 obv. 4
URU <i>Kizzuwatna</i> ¹¹³	3[+?]/[?]	URU <i>ki-iz-zu-at-ni</i>	KUB 30.63 ii' 5
		URU <i>ki-iz-zu-wa-at-ni</i>	KUB 30.63 iii' 8
		URU <i>ki-iz-zu-wa-at-na</i>	KBo 31.8+ iv 22, 27
URU <i>Lušna</i> ¹¹⁴	2/2	URU <i>lu-uš-na-a</i>	IBoT 3.138: 2'
		URU <i>lu-uš-na</i>	KUB 17.19 rev. 9'
URU <i>Nerik</i> ¹¹⁵	3/4	URU <i>ne-ri-ik</i>	KBo 31.31 obv. 5
		URU <i>ne-ri-ig-ga</i>	KBo 31.8+ i 6 KBo 31.1+ iii 3
		URU <i>ne-ni-r[i-</i>	KBo 31.1+ iii 5
URU <i>Ninuwa</i> ¹¹⁶	2[+?]/[?]	URU <i>ne-nu-wa</i>	VBoT 133 obv. 8'
		URU <i>ni-nu-wa</i>	KUB 8.69 iii 2 Bo 3203 i 8
		URU <i>ni-i-nu-wa</i>	KUB 30.51+ iv 31'

¹⁰⁸ RGTC 6, pp. 32–36; RGTC 6/2, pp. 10–11.

¹⁰⁹ RGTC 6, pp. 42–45; RGTC 6/2, p. 14.

¹¹⁰ RGTC 6, pp. 71–74; RGTC 6/2, p. 24.

¹¹¹ RGTC 6, pp. 124–126; RGTC 6/2, p. 43.

¹¹² RGTC 6, p. 143.

¹¹³ RGTC 6, pp. 211–216; RGTC 6/2, p. 81.

¹¹⁴ RGTC 6, p. 252; RGTC 6/2, p. 97.

¹¹⁵ RGTC 6, pp. 286–289; RGTC 6/2, pp. 113–115.

¹¹⁶ RGTC 6, pp. 284–285; RGTC 6/2, pp. 112–113.

Geographic names	# of diff. spellings/ citations		
URU <i>Purušhanda</i> ¹¹⁷	2/2	URU <i>pu-ru-uš-ḥa-an-da</i>	KBo 31.11: 7'
		URU <i>pār-šu-ḥu-un-ta</i>	KUB 17.19 rev. 4'
URU <i>Šamuḥa</i> ¹¹⁸	2[+?]/[?]	URU <i>ša-mu-u-ḥa</i>	KUB 8.71 obv. 9'
		URU <i>ša-pu-ḥa-za</i>	KUB 30.56 iii 21 ¹¹⁹
URU <i>Tawiniya</i> ¹²⁰	2/2	URU <i>ta-ú-i-ni-ia</i>	KBo 10.6 i 9'
		URU <i>ta-wi₅-ni-ia</i>	KBo 31.27+ i 6'
URU <i>Zikazhura</i> ¹²¹	2[+?]/[?]	URU <i>zi-ga-az-ḥur</i>	KBo 31.8+ iv 12
		URU <i>zi-ga-az-hu-ra</i>	KBo 31.27+ i 21'
URU <i>Zippalanda</i> ¹²²	2[+?]/[?]	...-i]p-pa-lan-da	KBo 31.31 obv. 4
		URU <i>zi-ip-la-an-da</i>	KBo 31.27+ i 20'

Table 14: Geographic names showing variant spelling in the tablet catalogues

Brief Comparison with CTH 381

In his work on CTH 381, Muwatalli's prayer to the assembly of gods, Houwink ten Cate recognised several differences between the two main exemplars: KUB 6.45 and KUB 6.46.¹²³ These differences include: incorrectly inscribed signs; omission of signs, words, and groups of words; corrections, erasures, and superscripts; misplaced words; errors involving the miswriting (deformity) of nouns or proper nouns due to a preceding or following noun or proper noun.¹²⁴ The errors are detectable especially when comparing KUB 6.46 to the "cleaner" KUB 6.45. The conclusion drawn from this by Houwink ten Cate, with some modification by Singer,¹²⁵ is that KUB 6.46 was created through dictation, while the scribe of KUB 6.45 copied his text directly from KUB 6.46 and attempted to edit and clean up the errors within the original.

Unlike KUB 6.45, the two shelf lists under consideration here, KUB 30.51+ and KBo 14.68+ demonstrate no evidence for one having being copied from the other. The shelf lists were created independently from one another, both through dictation. As such, it is not surprising that that errors shared between the texts (*errores coniunctivi*) are not found; instead the differences are entirely introduced by the scribes of each text (*errores separativi*).

¹¹⁷ RGTC 6, pp. 323–324; RGTC 6/2, p. 128.

¹¹⁸ RGTC 6, pp. 338–341; RGTC 6/2, p. 137.

¹¹⁹ In IBoT 3.138: 5' we find]-pu-ḥa for likely URU *ša*]-pu-ḥa, although for this study the restoration cannot be assumed.

¹²⁰ RGTC 6, pp. 416–418; RGTC 6/2, p. 167.

¹²¹ RGTC 6, pp. 500–501.

¹²² RGTC 6, pp. 505–509; RGTC 6/2, p. 196–198.

¹²³ Houwink ten Cate 1968.

¹²⁴ Houwink ten Cate 1968, p. 205 especially.

¹²⁵ Singer 1996, pp. 135–142. Singer also draws from the work of the unpublished dissertation of Harald Winkels (1979, p. 15).

Explaining the Differences

The quantity of variant writings between the parallel shelf lists KUB 30.51+ (A) and KBo 14.68+ (B) requires explanation. One possibility, as mentioned above, is that we have two separate but identical collections of tablets, one represented by List A and the other by List B. The text of these separate collections would contain a number of orthographic and even phrasing differences, and these would be represented by the variation found between the two lists. Although it is possible that the two lists were found in different buildings on Büyükkale, it must be stressed that the presence of lists in different locations does not *ipso facto* mean that we are dealing with two separate tablet collections. While we must allow for the possibility of two separate, albeit orthographically variant, collections of tablets kept in the exact same order (without any clear means for maintaining this order), this is an overly complicated scenario.

It is more likely that Lists A and B were created from the same collection of tablets. Certain tablets had been added/removed between the compiling of the lists. The variation in orthography and wording can easily be explained as the result of dictation. If two scribes worked in tandem, one would have read, or even summarised, the content(s) of a tablet while the second wrote the information down on the catalogue.¹²⁶ This scenario explains both types of variation found in the lists. Orthographic differences can easily occur when one is writing not from sight but rather from sound. That this variation is found primarily with proper nouns and longer words would therefore not be surprising. The combination of signs used to write shorter words would be standardised and learned during scribal training. While occasional variant spellings can be expected, the writing of these shorter words should be fairly standardised. Proper nouns, however, may not have been a part of regular training. The writing of names would be learned on an individual basis as scribes worked with tablets.¹²⁷ This would explain the high degree of variation in the spelling of proper nouns across the shelf lists.¹²⁸ The variation in wording would have been the result of either the person giving dictation paraphrasing tablet content, the transcriber modifying material as he wrote it down, or some combination of factors.¹²⁹

If the dictation model holds, then other observations can be made. If the catalogues were created by a transcriber through dictation, then the cuneiform signs that he used are reflections of

¹²⁶ It is unlikely that we are dealing with “dictée intérieure” (Dain 1975, pp. 44–46), or the creation of dictation mistakes based on interior, aural pronunciation of words by a copying scribe. Although this could account for some orthographic differences between the two texts, the range of grammatical and phrasing differences speak against this.

¹²⁷ Note that this could also explain the mistaken gender assigned to Ammiḫatna (male in KUB 30.51+ ii 3' but female in KBo 31.27+ ii 5'). If names were spoken without reference to gender, it would be the responsibility of the transcriber to assign either a DIŠ or MUNUS sign to the PN. If the transcriber did not know the gender of the person based on the name alone, then confusion might occur. It is quite possible that the scribe who wrote down KBo 31.27+ (List B), did not know that Ammiḫatna was a masculine name.

¹²⁸ That names such as Hebat and Telipinu show virtually no variation in spelling may be explained as a result of scribal training. If students were exposed often to these names in the written form, then the spelling would become canonised.

¹²⁹ One can imagine different mitigating factors for the changes in wording and phrasing. Tracing the cause is ultimately impossible as it could be located with the person giving the dictation, the scribe, or both of them. Because the scribe is removed from the original text, there is always the possibility (or likelihood?) that he was consciously or unconsciously recreating the text from his faulty memory (even if there is very little temporal break between the dictation and the writing).

his mental sign list developed over years of training, rather than copies of those signs used on the tablets of the collection. Therefore any variation in sign shape would be the result of a choice, although not necessarily a conscious one, by the transcriber. For example, in List A (KUB 30.51+) we find mostly younger LI signs (e.g., i 15', ii 18', iv 22'), but in ii 23, there is clearly an older LI.¹³⁰ In List A iv 15' we have an older IK, while three lines later in iv 18' a young IK. If dictated, then the use of older or younger sign variants would not be a reflection on the age of the tablets catalogued by the list, but rather of the preference of the scribe. The scribe of List A could be said to prefer the younger LI, but the older variant was available for instantaneous use from within his mental repertoire. This means that the approximate age of the tablets catalogued in Lists A and B cannot be determined based on paleographic criteria, only their *terminus post quem*.¹³¹

Conclusions

The present work has demonstrated that the pattern of orthographic and phrasal differences between the parallel tablet lists KUB 30.51+ (List A) and KBo 14.68+ (List B) are highly meaningful. It is assumed here that the two lists were created from the same group of tablets, with the allowance that some tablets were pulled from/added to the collection, as indicated by the entries in List B not found in List A. This assumption is held to be valid since the alternative is to imagine two identical sets of tablets in different parts of Büyükkale. Given the complete absence of any clear method by which tablets can be serialised and therefore stored in a precise and consistent order, it seems unlikely to the present author that Lists A and B represent separate collections. If the two lists were created from the same exact collection of tablets, the high number of spelling and phrasal variations found between the lists requires an explanation. The most likely explanation for the differences in the lists is that they are the direct result of dictation.

Some of the most telling data in support of this explanation is the variation in the spelling of proper nouns. Personal, geographic and divine names display highly variant spelling not just between the two lists under study, but across all tablet lists. It is my contention that in these texts proper nouns represent a class of words that, for the most part, do not have canonical forms. With the exception of certain names such as *Hebat* and *Telipinu*, most names in the tablet lists display variant writings. That a proper noun is spelled in two different ways for the same text entry points to transcription from dictation rather than copying from sight. Equally important is the amount of phrasal variation between the two lists. Based on preliminary examination of dictation and copying by sight by present day college students, the omission or addition/alternation of elements is far more common in the case of the former (see Appendix). The variation in phrasing between the two lists indicates that verbatim repetition of the original text was not as important as an *ad sensum* paraphrasing.

¹³⁰ The sign is somewhat obscured by a mark on the tablet, but it is clearly an old LI (collated from photo: hethiter.net/PhotArch/BoFNo4192).

¹³¹ The issue of palaeography in Hittite is becoming increasingly complicated. A proportional analysis of old to young signs in both of these documents may have proved highly rewarding had they been completely or even mostly preserved. Given the relatively poor level of preservation of both tablets, however, it would be impossible to determine if the results of the study skew the actual proportion in either direction, rendering the final results ultimately inconclusive.

The data provided in table 9 above demonstrated that spelling variation in Lists A and B made up 18 per cent of the preserved word forms (out of 120 total forms). In the appendix I provide the results of a modern experiment involving copying and dictation, conducted in order to test the ancient material. For those who directly copied from sight, the margin of error was 0.95 per cent (out of 3045 word forms). For the participants who copied from dictation, we find 6.3 per cent spelling errors (out of 2900 word forms), a considerable increase from those who copied by sight. The results are summarised in tables 15 and 16 (for the data, see the appendix). A clear conclusion from this experiment is that, given the variation found in the ancient texts studied here, Lists A and B, is even higher than in the experiment, it is hard to imagine that these texts were created by any other means than dictation.

copied (21 people)	non-proper	proper	total
variation	13	16	29 (0.95%)
no variation	2633	383	3016
total	2646	399	3045

Table 15: Results from copying by sight

dictation (20 people)	non-proper	proper	total
variation	57	126	183 (6.3%)
no variation	2463	254	2717
total	2520	380	2900

Table 16: Results from dictation

If the arguments made here hold, then it can be demonstrated that Hittite scribes created new documents through dictation. This does not mean that dictation was the only method by which texts were created. We cannot take a one-dimensional approach to Hittite scribal practices. It is certain that texts were created in a variety of ways, of which dictation was but one. It must also be cautioned that the evidence adduced above holds only for shelf lists, and perhaps not even for all of them.¹³²

¹³² Dictation has long been used as a method of increasing a student's ability to both properly spell and process oral utterances (see, for example, Leavenworth 1926). The use of dictation to increase spelling proficiency is, however, not as clearly applicable to the ancient world. The alphabetic script used in western classrooms is quite different from cuneiform. Where there is a high degree of rigidity in the correlation between symbols and word with alphabetic scripts, the syllabic nature of cuneiform allows for much more fluidity. There are many more sign choices available to the cuneiform scribe than to the alphabetic one. While some Hittite words may have largely fossilised spellings (e.g., 3.sg. pres./fut. *pa-a-i* from *pai-* B "to go;" see CHD P p. 41 sub *pai-* B), alternative, but not incorrect, writings of words are plentiful. This does not, however, mean that comparisons between the use of alphabetic and cuneiform scripts cannot or should not be made. Although spelling conventions differ between the two, it may be that the physical and mental act of writing is more similar between alphabetic and cuneiform scribes.

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Appendix: A Modern Study on Dictation

While working on the issue of dictation in the Hittite shelf lists I designed and conducted an experiment to discover what actual differences there were between hand copying and dictation. Through this experiment I wanted to see how the differences between copying and transcribing from dictation compared with the contents of the ancient shelf lists. The results from my first trial strongly support my claim in the present article that the parallel shelf lists KUB 30.51+ (List A) and KBo 14.68 (List B) were created through dictation and that the other shelf lists were likely made this way too.

For the experiment I created a list of ten works of literature and styled the entries after the Hittite shelf lists. For example, the first entry was: "One copy of *To Kill a Mockingbird* by [Ms.] Harper Lee. When he was nearly thirteen, my brother Jem got his arm badly broken at the elbow." In order to make these examples roughly parallel to the Hittite tablet lists I began with "x copy of" where x was a random number, typically "1".¹³³ The title indicating the gender of the author is in brackets because I omitted it when reading the passage aloud. The transcribing students were asked to circle either a "Mr.," "Ms." and/or "?" to mark the gender of the author.¹³⁴ I wanted to look at the distribution of mistaken identification of gender to see if it compared to the errors that we find in the Hittite texts. For the list of books, I chose some works that I felt would be familiar to college-aged students, such as *To Kill a Mockingbird* and *Adventures of Huckleberry Finn*, as well as some that would be less familiar to them, such as the *Tale of Genji*. This was done in order to see if the errors/differences that occur with dictation had any correlation to familiarity with the work. This element of the experiment is underrepresented in the results and will be more fully fleshed out in future iterations of it.

The experiment was conducted with two groups of college students. The first group consisted of 21 students who were asked to copy the texts down from sight. This group functioned as my control.¹³⁵ The second group consisted of 20 students. With this group, I read each entry twice at a fairly slow pace, pausing between entries to give the students a chance to transcribe the material.

The following mistakes/issues were recorded:

1. misspellings — any misspelling of words
2. omission — any omission of words
3. erasures — when a word was erased and a new word written. When possible I include the erased word
4. superscript — when words were written above the line of text in order to add/fit them in
5. changed phrases — when the phrase given by me was altered
6. abbreviations — when an abbreviation was given instead of the fully spelled out/spoken word

The following are the results for the first five entries on the list used in the experiment. I have simplified the types of errors tested for in this exploration. Each entry, below, will be prefaced with the text that was copied/dictated. For each item, I will give a table for the following three "errors": spelling, erasures, and omission/alternation. This last type is rather broad and is used to hold all examples of phrases/clauses added to or subtracted from a particular entry as well as the use of alternative words and changed phrases (mistake type "5" above). I have included abbreviations as a form of misspelling, collapsing mistake types "1" and "6" as forms of misspellings. Superscripting is quite infrequent and has been excluded for the present (see below). For the first entry I also provide a more detailed display of the actual errors found with copying and with transcribing from dictation.

¹³³ Of potential interest here is how numbers are treated in dictation: will they be given as Arabic numerals or spelled out?

¹³⁴ If they felt confident they were to circle either "Mr." or "Ms." If they had some doubt they were to circle the one that they felt was correct as well as the question mark. If they were unsure they were to just circle the question mark.

¹³⁵ A point of issue here is that I projected the texts on a screen. It may have been difficult for some students to see all of the text and this may have introduced extra errors into their copies. In the future, each person of the control group will be given a sheet of paper containing the information to be copied.

1. One copy of *To Kill a Mockingbird* by [Ms.] Harper Lee. When he was nearly thirteen, my brother Jem got his arm badly broken at the elbow.

Comparison of errors:

	Copy	Dictation
Spelling	Ø	5
Erasure	2	Ø
Omission/Alternation and Changed phrases	2	28
Totals	4	33

Table 1: Comparison between copy and dictation errors for first passage

I. Copy:

Erasure	Omission
(1) /e/lbow	(1) [at the elbow]
(1) at (erasure) the	(1) “thirteen[,] my”

Table 2: Errors in copying for the first passage

II. Dictation:

Spelling	Changed Phrases	Omission/Alternation
(1) whe[n]	(4) ... “broke his arm”	(1) (to kill) [a] (mockingbird)
(2) Moking	(1) “When my brother was nearly ten”	(3) “Jim” for “Jem”
(1) Mockcing	(1) “broke his arm badly”	(1) “Joe” for “Jem”
(1) bably	(1) (When he was nearly 13) “he broke his arm”	(1) “Jed” for “Jem”
	(2) (... my brother Jem) “broke his arm”	(1) “my brother [...]”
	(1) “near 13 bro. broke arm”	(1) ... “bably[sic] [broken] at the elbow”
	(1) ... “got his arm broken”...	(1) “My brother Jim broke his arm”
	(1) ... “my brother badly broke his arm”	(1) “When my brother Jem something something?”
		(1) “when he ws nearly 13 [...]”
		(1) “When [...]”
		(1) “When he was [...] 13 [...]”
		(1) “one copy [of]”
		(1) [by]
		(1) [entire quotation]

Table 3: Errors of dictation for the first passage

2. One copy of the *Adventures of Huckleberry Finn* by [Mr.] Mark Twain. You don't know about me without you have read a book by the name of *The Adventures of Tom Sawyer*.

	Copy	Dictation
Spelling	6	27
Erasure	2	6
Omission/Alternation and Changed phrases	6 ¹³⁶	28
Totals	14	61

Table 4: Comparison between copy and dictation errors for second passage

I. Copy:

Spelling	Erasure	Omission
(1) Sawere	(1) /e/lbow	(1) [at the elbow]
(1) Sawyer	(1) at (erasure) the	(1) "thirteen[,] my"
(1) Saywer		(1) "[without]"
(1) <i>Adventur</i>		
(2) dont		

Table 5: Errors of copying for second passage

II. Dictation

Erasure	Spelling	Changed Phrases	Omission/Alternation
(1) "unless[sic] (erasure) you"	(5) Huck	(1) "with the name"	(3) [by]
(1) "about the adventures"	(1) Hucklebery	(1) "about the name"	(2) [by the name of <i>The Adventure of</i>]
(1) "Sawyer" ["w" written over an extraneous "y"]	(1) Huckelberry	(1) "unless you know"	(1) "name" [of]
(1) "know know"	(2) Huckle Berry	(1) "Mark Twain" (for "a book by the name of <i>The Adventures of Tom Sawyer</i> ")	(1) [You]
(1) "would"	(1) Hucklberry	(1) "about Tom Sawyer"	(1) [by the name of <i>The</i>]
(1) "had"	(1) Huckle-Berry	(1) "w/ Tom Soyer[sic]"	(1) [by the name]
	(6) Fin	(1) "of the Adventures of Tom Sawyer"	(1) [by the name of]
	(1) you've ¹³⁷	(1) "about me, <i>The Adventures of Tom Sawyer</i> "	(1) [the] " <i>Adventures of Huckleberry ...</i> "

¹³⁶ Three omissions are of "Mr."

¹³⁷ I have treated this contraction for "you have" as a misspelling here.

Erasure	Spelling	Changed Phrases	Omission/Alternation
(1) “had”	(1) dont	(1) “the story of”	(1) [One copy of the]
	(1) Swayer	(1) “about <i>The Adventures of Tom Sawyer</i> ”	(1) [One copy of]
	(2) Soyer		(1) [by the name of <i>The Adventures of Tom Sawyer</i>]
	(1) Adv		(1) [a book by the name of <i>The Adventures of Tom Sawyer</i>]
	(1) Adventure		(1) “of the”
	(1) Marc		(1) [<i>The Adventures of</i> “Tom Sawyer”]
	(2) w/out ¹³⁸		(1) all material after “read”

Table 6: Errors of dictation for second passage

3. Two copies of *The Fountainhead* by [Ms.] Ayn Rand. He stood naked at the edge of a cliff.

	Copy	Dictation
Spelling	2	28
Erasure	3	4
Omission/Alternation	2 ¹³⁹	4
Totals	7	36

Table 7: Comparison between copy and dictation errors for third passage

I. Copy:

Spelling	Erasure	Errors
(1) Aye	(1) “stood (erasure) naked”	(2) “the cliff”
(1) Fauntainhead	(1) “the a cliff”	
	(1) “Ryad Rand”	

Table 8: Errors of copying for third passage

¹³⁸ I am treating this here as a spelling issue, but it can alternatively been taken as a form of abbreviated writing akin to the use of ideograms (the same may hold for Adv).

¹³⁹ The two alternations are the writing of “the cliff” for “a cliff.”

II. Dictation

Erasures	Spelling	Omission/Alternation
(1) “stood (erasure) naked”	(13) Ayn ¹⁴⁰	(1) “[<i>The</i> ”
(1) “Two the ”	(5) Rand ¹⁴¹	(1) “[by Ayn Rand]”
(1) “Two (over erased ‘One’)”	(9) Fountain Head	(2) “[Rand]”
(1) “cliff. One ”	(1) Fountain	

Table 9: Errors of dictation for third passage

This particular passage was particularly enlightening. The PN “Ayn Rand” is one that was not overly familiar to the students. Furthermore, neither the first nor last name are commonly found in the United States. This lack of familiarity is why 18 of the 28 spelling errors are for this name. Of the remaining ten errors, nine simply involved making “Fountainhead” into two words, while the other involved the omission of “head.” The cited first line of the text, “He stood naked at the edge of a cliff,” contains short words that are common in the English language. The lack of spelling errors indicates that when the students were completely familiar with the terms, they could rely on their training in spelling to correctly copy them down.

4. One collection: one copy of *A Tale of Two Cities* by [Mr.] Charles Dickens. It was the best of times, it was the worst of times. One copy of *The Three Musketeers* by [Mr.] Alexandre Dumas. On the first Monday of the month of April, 1625, the bourg of Meung.

	Copied	Dictated
Spelling	11	71 (+ 15 abbreviations) ¹⁴²
Erasure	5	9
Omission/Alternation	6	28
Totals	22	106 (121)

Table 10: Comparison between copy and dictation errors for fourth passage

I. Copy:

Spelling	Erasure	Omissions
(1) Alexandr	(1) Dickens over erasure	(2) entire second book
(2) Alexander	(1) “it (over erasure) was the worst ...”	(1) “month [of] April”
(1) Alex... (... represents unreadable letters)	(1) “of the copy ² <i>The Three</i> ”	(1) [On the first Monday]

¹⁴⁰ Misspellings of “Ayn”: (4) “Ain,” (1) “Aind,” (1) “Anne,” (2) “Ane,” (1) “Ayne,” (1) Aran [sandhi writing for Ayn Rand], (1) “Ad’n’e’n,” (1) “Ang,” (1) “A...”

¹⁴¹ Misspellings of “Rand”: (1) “Ryad,” (3) “Rad,” (1) “Red.”

¹⁴² Abbreviations used include “Alex” and “A.” for “Alexandre” and “M.” for “Meung” (once each).

Spelling	Erasure	Omissions
(1) Meungn	(1) “worst worst”	(1) [the] “ <i>Three</i> ”
(1) Tale (T-sign miswritten)	(1) “Alexandre” (r written over an e)	
(1) Musketeer		
(1) Muskateer		
(1) Muskateers		
(1) Firs		
(1) Darwin (for Dickens)		

Table 11: Errors of copying for fourth passage

II. Dictation

Erasures	Spelling	Changed phrases	Omission/Alternation
(1) “on the of the Month”	(14) Alexandre ¹⁴³	(1) “of the year”	(4) “Cities [by]”
(1) “the birth Borg[sic]”	(13) Dumas ¹⁴⁴	(1) “on the borg[sic]”	(1) “Musketeers [by]”
(1) “the [for “A”] Tale”	(20) Meung ¹⁴⁵	(1) “copy by Charles Dickens A Tale of Two Cities”	(2) “of [the] three”
(1) “Bourg” [over erasure]	(1) Dikens		(2) “[of a] Tale”
(2) “copy” [with “collection” written over it]	(2) Charels		(3) “[of the] Three”
(1) “162(erasure)5”	(1) 162x [“x” given as final number]		(1) “of [the] 3”
(1) “borgue” under “boxg”	(2) board		(1) “on [the] first”
(1) “worse?”	(9) Borg		(1) “[One copy of The Three Musketeers by Alexandre Dumas]”
	(3) borgue		(1) “[of the month of]”
	(1) bourge		(1) “[the month of]”

¹⁴³ In order to save space, I will condense the following misspellings of proper nouns to footnotes. Misspellings of Alexandre: (12) Alexander, (1) Alexzander, (1) Alexan²d²r².

¹⁴⁴ Misspellings of Dumas: (1) Du, (1) Duma, (2) Dumai, (1) Duman, (1) Dumat, (1) Dumaat, (1) Dumois, (1) Dumont, (1) Dumount, (1) Doomah, (1) Lumad, (1) hizaen? (for Dumas).

¹⁴⁵ Misspellings of Meung: (1) mo²u²n, (2) moon, (2) Mun, (3) Mune, (7) Mung, (2) Mongue, (1) Mon²e², (2) Mounge.

Erasures	Spelling	Changed phrases	Omission/Alternation
	(1) Musketteers		(1) “worst [of times]”
	(1) Muskeeters		(1) “[1625, the bourg of Meung]”
	(1) tales		(1) “[One copy of the] 3”
	(1) one [for “on”]		(1) “[by Alexandre Dumas]”
	(1) on [for “one”]		(1) “[1625]”
			(1) “[Dumas]”
			(1) “[of] the bourg”

Table 12: Errors of dictation for fourth passage

For comments on the spelling of proper nouns in this passage, see below, under (5).

5. One copy of *The Tale of Genji* by [Ms.] Murasaki Shikibu. In the reign of a certain Emperor, whose name is unknown to us ...

	Copied	Dictated
Spelling	10	50 (+ 2 abbreviations) ¹⁴⁶
Erasure	1	6
Omission/Alternation	1	13
Totals	12	69

Table 13: Comparison between copy and dictation errors for fifth passage

I. Copy:

Spelling	Erasure	Omissions/Alternations
(2) Muraski	(1) “ region ”	(1) “Murasaki J.D. Salinger” ¹⁴⁷
(1) Murisaki		
(1) Geji		
(1) Genj		
(1) emporer		
(1) certin		
(1) Shikibuku		
(1) whos		
(1) region		

Table 14: Errors of copying for fifth passage

¹⁴⁶ Abbreviations: (1) “©” [for “copy”], (1) “emp.”

¹⁴⁷ The Japanese name here was apparently reanalysed as the more familiar “J.D. Salinger” after the correct “Murasaki.”

II. Dictation

Erasures	Spelling	Omission/Alternation
(1) “copy” [over erasure]	(6) Genji ¹⁴⁸	(1) “[in the reign of a certain Emperor, whose name is unknown to us...]”
(2) “reig(erasure)n”	(15) Murasaki ¹⁴⁹	(2) “[Tale of Genji]”
(1) “certain (erasure) emperor”	(11) Shikibu ¹⁵⁰	(2) “[the Tale of Genji by]”
(1) “c(erasure)ertain”	(1) “emperror”	(2) “[of] the tale”
(1) “un(over erasure)known”	(8) “emporer”	(2) “[by]”
	(1) “rane”	(1) “of [a] certain”
	(2) “rain”	(1) “[a certain Emperor, whose name is unknown to us]”
	(1) “riegn”	(2) “[One copy of the Tale of Genji by]”
	(1) “who”	
	(1) “whos”	
	(1) “who’s”	
	(1) “...” [for “Genji”]	
	(1) “un” [remainder of word missing]	

Table 15: Errors of dictation for fifth passage

Passages (4) and (5) are especially interesting with regards to the spelling of proper nouns when dictated. Both examples involve foreign names, (4) being the French “Alexandre Dumas” along with “Meung,” and (5) being the Japanese “Genji,” “Murasaki,” and “Shikibu.” The majority of spellings of “Alexandre” give the English spelling “Alexander” (12 out of 14). More difficult for the students was the surname “Dumas” with its silent finale “s,” and the place name “Meung,” which is likely unfamiliar to most of the students. Note that the term “bourg” was also frequently misspelled (15 times). The Japanese names, being unfamiliar to the students, were also frequently misspelled: “Genji” (6 with 4 omissions), “Murasaki” (15), and “Shikibu” (11). The presence of foreign terms, especially proper nouns, resulted in a large number of misspellings, almost certainly resulting from a lack of familiarity.

¹⁴⁸ Misspellings of Genji: (1) “Gungee”, (2) “Gengi”, (1) “Gengie”, (1) “Genshe”, (1) Genchy. Note that the number here is lower than that of “Murasaki” and “Shikibu,” but it does not include the four instances where “Genji” was simply omitted.

¹⁴⁹ Misspellings of Murasaki: (1) “Ma²r²”, (1) “Mazaki”, (1) “Moraski”, (1) “Morisaki”, (1) “Morisake”, (1) “Morsocki”, (1) “Moroshaukie”, (2) “Morosaki”, (2) “Morasaki”, (1) “Morusaki”, (1) “Morasacki”, (1) “Mortosoki”, (1) “Marsaki”.

¹⁵⁰ Misspellings of Shikibu: (1) “Shickieboo”, (1) “Shickiboo”, (1) “Shikabu”, (1) “Shikaboo”, (1) “Shikkibou”, (1) “Shikiboo”, (1) “Shiboo”, (1) “Schikibu”, (1) “Chickaboo”, (1) “Chickibu”, (1) “Chikiboo.”

Concluding remarks:

The following chart offers a summation of the types of errors found in both the copied and the dictated forms. The examples of abbreviations noted in the above charts are included in the total number of spelling errors.

	Copied	Dictated
Spelling	29	181
Erasure	13	25
Omission/Alternation	14	100
Totals	56	306

Table 16: Total number of error types between copy and dictation

It has been my belief that proper nouns should show greater variation in spelling when dictated, and this is borne out in the experiment. Note the following table:

Passage	Copied (spelling errors)		Dictated (spelling errors)	
	common nouns	proper nouns	common nouns	proper nouns
(1) 26 words	0	0	5	0 (5) ¹⁵¹
(2) 31 words	3	3	6	21 (+5 omissions)
(3) 17 words	1	1	18	18 (+ 2 omissions)
(4) 48 words	5	6	19	50 (+ 6 omissions)
(5) 23 words	4	6	9	32 (+ 6 omissions)
total (145 words)	13	16	57	126

Table 17: Comparison of spelling variation of proper and non-proper nouns

It is clear from this table that the spelling variation is far greater in dictated texts than in copied ones. This is especially notable with proper names that are foreign to many students in the United States. For the dictated passages, we see the following percentages for spelling errors of proper nouns: passage one, 8 per cent; passage two, 17.5 per cent; passage three, 45 per cent; passage four, 50 per cent; and passage five, 53 per cent. The percentages are even greater if we take into account the omitted names: passage one, 8 per cent; passage two, 18 per cent; passage three, 47 per cent; passage four, 53 per cent; and passage five, 59 per cent. Notice that for the last three passages, the ones with clearly foreign proper nouns (Ayn Rand, Dumas, Meung, Genji, Murasaki, and Shikibu), when omitted names are subtracted from the total word count per passage, we see increases of spelling variations of 2 per cent, 3 per cent, and 6 per cent respectively. These foreign names were especially problematic for the students, with the ratio of errors to correct spellings at 1:1 or even greater.

¹⁵¹ Note that "Jem" is written differently 5 times.

It is clear from the above chart, which is itself a simplification of the various types of errors found, that we can expect much more variation in spelling (orthography) and phrasing (through omission, addition, and/or alternation of words) in dictated material than that in copied material. There are, of course, situations in which dictation can be highly accurate, such as the work done by stenographers. That being said, transcribed material that has not been proofed for errors — and there is no reason to assume that the Hittite shelf lists have undergone such proofing — appears to be much more susceptible to mistakes. Furthermore, the numerous occurrences of omissions/alternations with dictation is noteworthy. The student-transcriber in this experiment aimed for general accuracy, which entails capturing the sense rather than a verbatim quotation.

An Inscription of Ashurnasirpal II in the Australian Institute of Archaeology

Luis R. SIDDALL

Abstract

*This article provides an edition, commentary and the provenance of an exemplar of Ashurnasirpal II's Wall Inscription (RIMA 2 A.o.101.26) which is kept in the Australian Institute of Archaeology (Melbourne). The inscription's excavation number is ND 1121 and it is now registered in the AIA with the catalogue number IA5.034.**

The Australian Institute of Archaeology (AIA) located at La Trobe University in Melbourne houses the nation's largest collection of cuneiform texts with over a hundred items listed in its catalogue. Of these a prized artefact is a large gypsum tablet from the reign of Ashurnasirpal II who ruled Assyria from 883 to 859 BCE. The tablet was rediscovered during the British School of Archaeology in Iraq's (BSAI)¹ excavations on the North West Palace at Calah (Nimrud) in 1951 after its initial discovery during Austen Henry Layard's excavations in 1845–1847.² The British archaeologists found the tablet on the floor by the eastern wall of Ashurnasirpal's throne room in the North West Palace under a fallen fresco, which may explain why a corner has broken away (Figs 1 and 3).³ On 7 November, 1952, Max Mallowan, as head of the British excavations, presented the inscription (together with 25 other artefacts from the excavation) in gratitude for the AIA's financial support of the BSAI's work during the 1940s and 1950s.⁴ The letter from M. E. L. Mallowan to J. A. Thompson, the director of the AIA at the time, is reproduced in Figure 5. The tablet's excavation number is ND 1121 and it is now registered in the AIA with the catalogue number IA5.034.

The inscription is one exemplar of a number of tablets inscribed with the "Inscription from the Wall at Nimrud" (hereafter: the Wall Inscription), so named after Ashurnasirpal's statement

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¹ Now called the British Institute for the Study of Iraq (BISI).

² Wiseman 1952, p. 61.

³ It may be gleaned from Donald Wiseman's (1952, pp. 61 and 66) summary of the find spot that the tablet was found in close proximity to Ashurnasirpal's throne base (ND 1122).

⁴ See also Mallowan 1953, p. 1.



Fig. 1. IA5.034 Obverse.

that the inscriptions were deposited in a wall at Calah (*narâ alṭur ina dūrīšu aškunū*).⁵ Given that this tablet was found near the eastern wall of the throne room, it is most probable that Ashurnasirpal was referring to the interring of tablets within the very walls of his throne room.⁶ Placing stone tablets in the fabric of buildings was a common practice among Assyrian kings from the Middle Assyrian period on.⁷ Indeed, Ashurnasirpal even introduced new practices of deposition, such as the use of stone tablet boxes. The location of this tablet near the throne base is of particular interest because it suggests that it was once a part of the centre of the palatial complex, for the throne room, with its mythical reliefs and text-rich decorations, created a “focus of power” that served to champion Ashurnasirpal as king of Assyria.⁸ It should be noted that the hidden location of our tablet means that it had a different function from those reliefs and inscription on display in the throne room and other areas of the so-called state apartments of the palace. Its function was not to inform or inspire fear in a contemporary audience (*i.e.* the palace attendants or visiting officials), but rather to record the king’s deeds for future rulers when it was time to renovate the building.⁹

The version of the Wall Inscription in the AIA has not been edited previously, but Kirk Grayson incorporated it into RIMA 2 (A.O.101.26) having collated the text from photographs received from David Searle, the former curator of the museum at the AIA.¹⁰ Grayson pointed out in his edition that no score of the different inscriptions could be produced for this text because he was unable to collate many of the exemplars.¹¹ Indeed, the majority of Ashurnasirpal’s inscriptions have not been individually edited, which has become a concern for those who have worked on his inscriptions.¹² While Grayson was able to use the photograph of this text in his edition of the Wall Inscription, the absence of a score means that some of the idiosyncrasies of this edition have remained hidden from scholars. Further the photographs Grayson used (Figs 1–3) do not show those signs inscribed on the right edge of the tablet (Fig. 4). What follows aims to fill a part of this gap by providing an edition of the inscription with philological comments that concentrate on its idiosyncrasies.

The inscription opens with Ashurnasirpal II’s titles and epithets (ll. 1–12), followed by an *enūma* clause that summarises his victories over cities to the north, east, west and south of Aššur (ll. 13–31a) with a statement about the tax and tribute he imposed on those cities (ll. 31b–r. 10a).

⁵ This section of the inscription was not included in the exemplar studied here. For the relevant section see A.O.101.26:67 in Grayson 1991, p. 282.

⁶ Ellis (1968, p. 100) recounts that Layard discovered a number of “alabaster tablets” under collapsed reliefs that had once been deposited in the upper sections walls of the throne room, above the inscribed slabs.

⁷ See Ellis 1968, pp. 96–103; and Pedersén 1997, pp. xxxii–xxxiii, 63–81.

⁸ Oates and Oates 2001, pp. 48–53. It is beyond the present article to reconstruct the textual, artistic and architectural environment of the tablet’s context further than the present outline. For detailed studies and reconstructions of the North West Palace see Meuzynski 1981; Paley and Sobolewski 1987 and 1992; Paley 1976 and 2008; and Russell 1999, pp. 9–63, and 2008; and Roaf 2008. For recent treatments of the artistic motifs of kingship present in Ashurnasirpal’s palatial art see Russell 2008 and Ataç 2010, pp. 14–38, 85–144.

⁹ Ellis 1968, pp. 100–101. For detailed discussions on the possible reasons for depositing tablets and other texts in the foundations and structures of buildings see Ellis 1968; Weeks 2007; and Siddall 2013, pp. 134–146.

¹⁰ A photograph of the obverse of the tablet (Fig. 1) was published in an exhibition catalogue Davey 2003, cat. no. 1; and by Siddall and Horowitz 2013, fig. 3.

¹¹ Grayson 1991, p. 279.

¹² For example, Russell 1999, pp. 13–14.

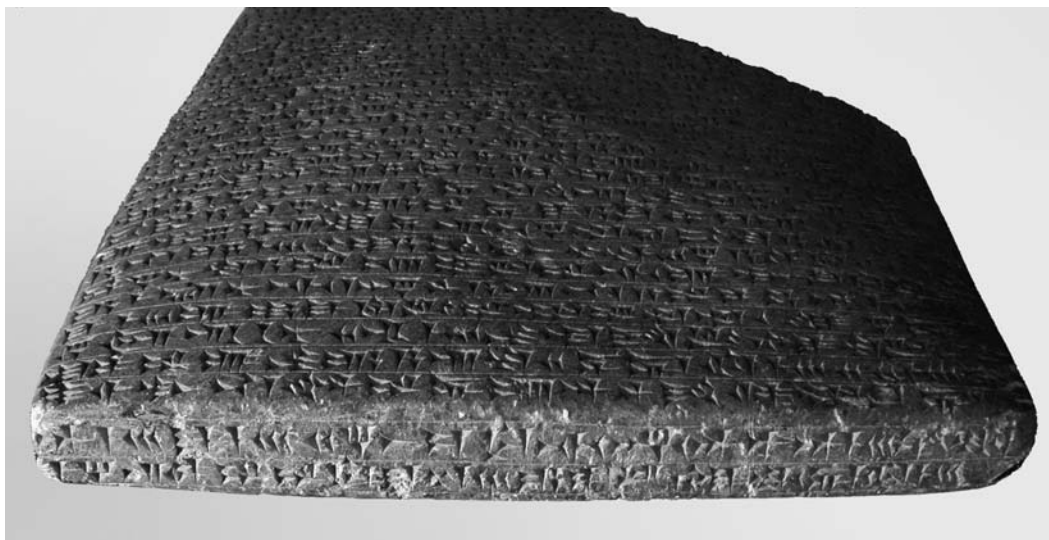


Fig. 2. IA5.034 Lower edge.

The text closes with a report on his building projects at Calah (ll. r. 10b–r. 32). As noted above, the tablet is missing its upper right corner which has affected ll. 1–17 on the obverse and ll. r. 21–r. 31 on the reverse. Rather interesting is the fact that the inscription is incomplete and ends mid sentence despite having enough space for at least three more lines of text (Fig. 3). This is in contrast to the floor slabs from Ashurnasirpal's reign which seem to have been concerned with filling the entire space available with writing.¹³ It is unclear why the scribe(s) did not complete the inscription. However, it is not the only exemplar that ends prematurely with at least three others finishing at approximately the same point.¹⁴ Ashurnasirpal's scribes later incorporated parts of this inscription into other well-known inscriptions from Calah.¹⁵ The most notable are ll. 1–58a of the longest exemplar, BM 90868,¹⁶ which were used in one of the episodes that interludes the narrative of the so-called "annals,"¹⁷ as well as part of the Standard Inscription.¹⁸ Ll. 58b–64a of BM 909868 were also incorporated into the Standard Inscription.¹⁹

Scholars generally agree that the Wall Inscription is one of the earliest texts Ashurnasirpal II commissioned at Calah. This is on account of the extent of conquered regions included in the *enūma* clause, the building account and the number of titles and epithets ascribed to the

¹³ Russell 1999, p. 49.

¹⁴ It should be noted that Grayson generalised the point at which this and the other shorter versions of the text ends in the catalogue for A.o.101.26. The present text is one line shorter than Grayson's Ex. 2 (Grayson 1991, p. 279).

¹⁵ For a good coverage of the relationship between the Calah texts see de Filippi 1977.

¹⁶ See Budge and King 1902, pp. 177–188; and Grayson 1991, pp. 280–282.

¹⁷ A.o.101.1 iii 113–136, in Grayson 1991, pp. 221–223, see also the comments on pp. 191–192, 278.

¹⁸ A.o.101.23 in Grayson 1991, pp. 268–276.

¹⁹ A.o.101.23: 18–21, in Grayson 1991, p. 276; see also the comments on p. 278.



Fig. 3. IA5.034 Reverse.



Fig. 4. IA5.034 Inscribed right edge.

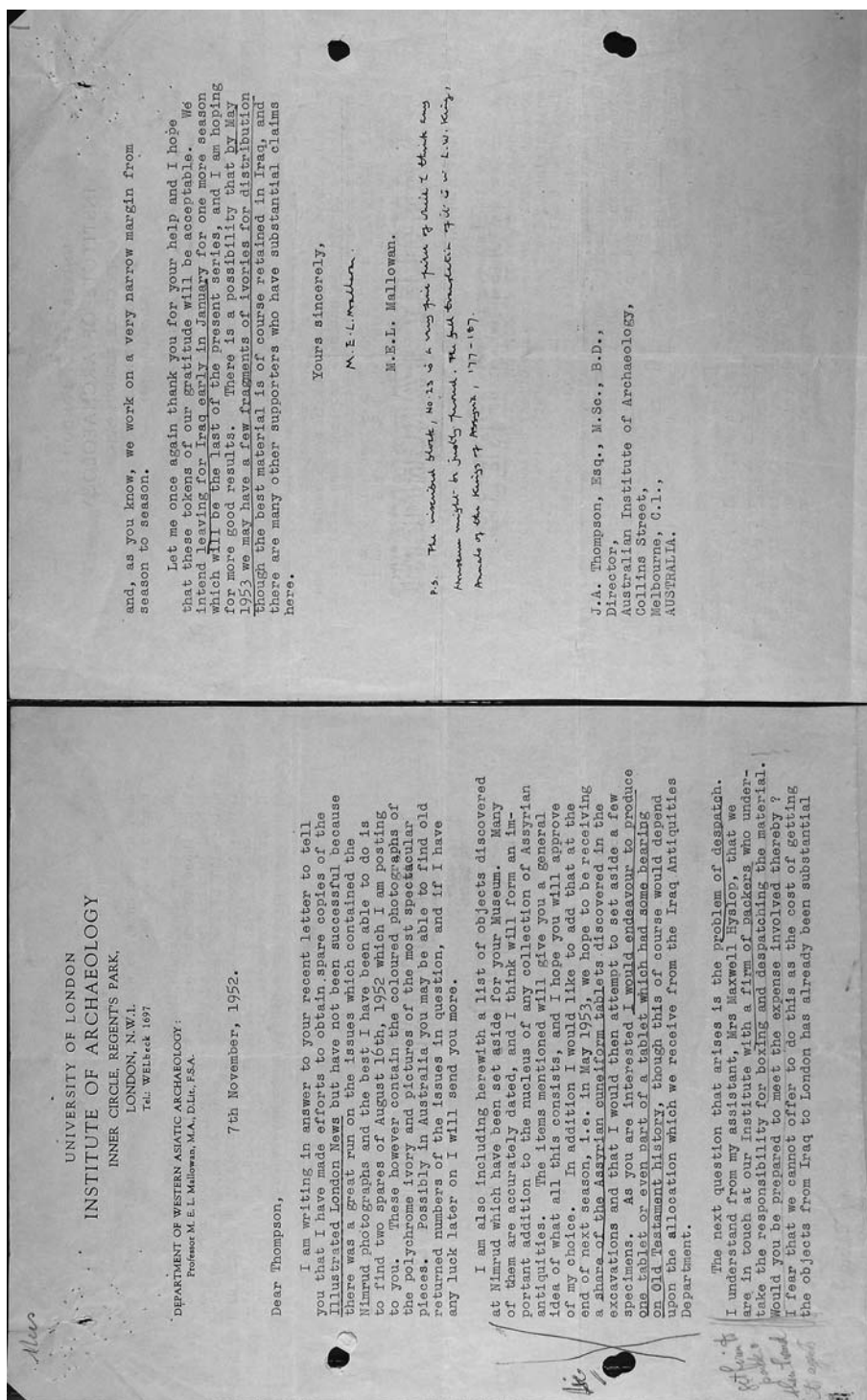


Fig. 5. Letter from M. E. L. Mallowan to J. A. Thompson.

king. While this inscription does not distinguish between military campaigns,²⁰ the reference to Carchemish in l. 20 as the western-most point under Ashurnasirpal II's authority places it before the campaign to Lebanon and the Mediterranean Sea *c.* 874 BCE.²¹ Similarly, the reference to the northern region as ranging from the source of the Subnat River to the interior of Nirbe (ll. 21–22) is altered in inscriptions composed after 866 BCE which replace Nirbe with Urartu.²² According to Reade, this inscription is the earliest account of the construction work on the North-West Palace.²³ Certainly the fact that this inscription is a foundation deposit in the city wall means that it was commissioned during the early phases of the construction work at Calah. Yet the name Patti-Nuḫši/Ḫegalli for the canal (l. r. 17) places this text after the Kurkh Monolith (*c.* 879 BCE), which refers to it as the Bābelat-Ḫegalli.²⁴ Finally, the fewer titles and epithets included in this text is important, for scholars have demonstrated that the Assyrian kings' titles and epithets become more detailed and numerous over the course of their reigns and as a consequence they are chronologically significant.²⁵ The fact that the Wall Inscription is three epithets shorter than another rather early text from Calah inscribed on the back of the wall slabs dates this text to an early phase of Ashurnasirpal's reign.²⁶ These observations have led scholars to date this inscription to sometime during the years 875 to 874 BCE.²⁷

Edition of IA5.034

Reign of Ashurnasirpal II (883–859 BCE)

Nimrud (ND 1121)

Gypsum, 48 × 37 × 9 cm

Obverse

1. ^m*aš-šur*-PAB-A MAN GAL-ú MAN *da*[*n-nu* MAN ŠÚ MAN KUR *aš-šur* A TUKUL-MAŠ]
2. MAN GAL-*e* MAN *dan-nu* MAN ŠÚ MAN KUR *aš*-[*šur* A U-ERIM.TÁḪ MAN GAL-ú]
3. MAN *dan-nu* MAN ŠÚ MAN KUR *aš-šur-ma e*[*ṭ-lu qar-du šá ina* ^{giš}*tukul-ti aš-šur*]
4. EN-šú *it-tal-la-ku-ma ina ma*[*l-ki*^{meš} *šá kib-rat* LÍMMU.TA]
5. *šá-ni*₄-*in-šu la i-šú-ú* ¹[^úSIPA *tab-ra-te la-di-ru*]
6. GIŠ.LAL *e-du-ú gap-šú šá ma-ḫi-r*[*a la-a i-šú-ú* MAN *mu-šá-ak-ni-iš*]
7. *la-a kan-šu-ti-šú šá nap-ḫar kiš-šat* U[N^{meš} *i-pe-lu NÍTA dan-nu*]
8. *mu-kab-bi-is GÚ a-a-bi-šú da-i-i*[*š kul-lat KÚR*^{meš}]

²⁰ For coverage of Ashurnasirpal II's campaigns see Grayson 1982, pp. 253–257; Liverani 1992; and Fischer 1998, p. 205.

²¹ De Filippi 1977, pp. 149–151; Reade 1985, p. 205; Russell 1999, p. 19.

²² De Filippi 1977, p. 152; Reade 1985, pp. 205–206; Fischer 1998, p. 205; and Russell 1999, pp. 19 and 32. For an example from the Standard Inscription see A.o.101.23: 8–9, in Grayson 1991, p. 275.

²³ Reade 1985, p. 204.

²⁴ A.o.101.17: v 6, in Grayson 1991, p. 252; and De Filippi 1977, p. 153.

²⁵ Liverani 1981; and Cifola 1995.

²⁶ Russell 1999, p. 23. For a detailed treatment for Ashurnasirpal II's titles and epithets see Cifola 1995.

²⁷ De Filippi 1977, p. 168; and Reade 1985, p. 205.

9. *mu-pa-ri-ru ki-iš-ri mul-tar-ḥ*[i šá ina ^{giš}tukul-ti]
10. DINGIR^{meš} GAL^{meš} EN^{meš}-šú DU.DU-ma KUR.K[UR^{meš}-te DÛ-ši-na ŠU-su]
11. *ik-šu-du ḥur-šá-ni DÛ-šú-nu i-pe-lu-‘ma’ b*[i-lat-su-nu im-ḥu-ru]
12. *ša-bit li-i-ti* GAR-in li-i-te UGU D[Û-ši-na KUR.KUR^{meš}-te]
13. *e-nu-ma aš-šur* EN na-bu-ú MU-ia mu-ša[r-bu-ú]
14. MAN-ti-a ^{giš}TUKUL-šu la-a pa-da-a a-na i-da-a[t EN-ti-a]
15. *lu-ú it-muḥ* ERIM^{hi.a.meš}-at KUR lu-ul-lu-me-e DA[GAL^{meš}]
16. *ina qé-reb tam-ḥa-ri* ina ^{giš}TUKUL lu ú-šam-qit ina re-‘šu’-[te]
17. šá dšá-maš u ^dIŠKUR DINGIR^{meš} tik-li-a ERIM^{hi.a.meš}-at KUR.KUR n[a-i-r]i
18. KUR ḥáb-ḥi KUR šu-ba-re-e u KUR ni-ir-bi GIM ^dIŠKUR ra-ḥi-ši
19. UGU-šú-nu aš-gu-um MAN šá iš-tu e-ber-ta-an ^{id}IDIGNA
20. a-di ^{uru}kar-ga-miš šá KUR ḥat-te KUR la-qe-e ana si-ḥir-ti-šá
21. KUR su-ḥi a-di ^{uru}ra-pi-qi ana GÌR^{II}-šú ú-šék-ni-šá TA SAG e-ni
22. ^{id}su-ub-na-at a-di KUR ni-ir-bi šá bi-ta-ni ŠU-su
23. KUR^{ud} TA né-re-bi šá KUR kīr-ru-ri a-di KUR gīl-za-a-ni
24. TA e-ber-ta-an ^{id}za-ba KI.TA a-di ^{uru}DU₆-ba-a-ri
25. šá el-la-an ^{uru}za-ban a-di ^{uru}DU₆-šá-m^za-ab-da-ni
26. ^{uru}DU₆-šá-ab-ta-a-ni ^{uru}ḥi-ri-mu ^{uru}ḥa-ru-tu
27. bi-ra-a-te šá KUR kar-du-ni-áš a-na mi-iš-ri KUR-ia
28. ú-ter iš-tu né-re-be šá ^{uru}ba-bi-te a-di KUR ḥaš-mar
29. a-na UN^{meš} KUR-ia am-nu ina KUR.KUR^{meš} šá a-pe-lu-ši-na-ni
30. ^{lu}GAR-nu-te-a al-ta-kan ur-du-ti ú-pu-šu ku-dūr-ru
31. e-me-su-nu-ti ^maš-šur-PAB-A NUN na-a-du pa-līḥ DINGIR^{meš}
32. GAL^{meš} ú-šum-gal-lu ek-du ka-šid URU.URU u ḥur-šá-ni
33. paṭ gim-ri-šú-nu MAN EN^{meš} mu-la-iṭ ek-šu-te tiṣ-qa-ru
34. la pa-du-ú mu-rib a-nun-te MAN DÛ mal-ki^{meš} MAN MAN^{meš}-ni
35. i-ši-pu na-a’-du ni-bit ^dMAŠ qar-di ka-šu-uš

Lower Edge

- lo. ed. 1. DINGIR^{meš} GAL^{meš} MAN šá ina ^{giš}tukul-ti aš-šur u ^dMAŠ DINGIR^{meš} tik-li-šú
 lo. ed. 2. me-šá-riš DU.DU-ku-ma KUR^{meš}-e šap-šu-te u mal-ki^{meš}

Reverse

- r. 1. ^{lu}KÚR^{meš}-šú kul-lat KUR.KUR-šú-nu ana GÌR^{II}-šú ú-šék-ni-šá ^{lu}KÚR^{meš}-ut aš-šur
- r. 2. AN.TA u KI.TA iš-ta-na-nu-ma GUN u ma-da-tu UGU-šú-nu
- r. 3. ú-ki-nu ^maš-šur-PAB-A MAN dan-nu ni-bit ^d30[!](DINGIR^{meš}) me-gir ^da-nim
- r. 4. na-mad ^dIŠKUR kaš-kaš DINGIR^{meš} ^{giš}TUKUL la pa-du-ú mu-ú-šam-qit
- r. 5. KUR KÚR^{meš}-šú ana-ku MAN le-‘u-ú qab-li šá-giš URU.URU
- r. 6. u ḥur-šá-ni a-šá-red tuq-ma-te MAN kib-rat LÍMMU.TA mu-né-er
- r. 7. a-a-bi-šú KUR.KUR^{meš}-te dan-na-a-te ḥur-šá-ni ek-šu-te
- r. 8. MAN^{meš}-ni ek-du-te la pa-du-te iš-tu ši-it ^dšam-ši

- r. 9 *a-di e-reb* ^d*šam-ši ana GÌR^{II}-a ú-šék-ni-ša pa-a* ^I*-en*
r. 10 *ú-ša-áš-kín* ^{uru}*kal-ḫu maḫ-ra-a* *ša* ^{md}*SILIM-ma-nu-SAG*
r. 11 *MAN KUR aš-šur NUN a-lik pa-ni-a DÛ-šú URU šu-ú e-na-aḫ-ma*
r. 12 *iš-lal ana DU₆ u kar-me GUR URU^I(GUR) šu-ú ana eš-šú-te ab-ni*
r. 13 *UN^I(MA.ŠA)^{meš} ki-šit-ti ŠU^{II}-a ša KUR.KUR^{meš} ša a-pe-lu-ši-na-ni*
r. 14 *ša KUR su-ḫi KUR la-ge-e ana si-ḫir-ti-ša* ^{uru}*sir-qu ša né-ber-ti*
r. 15 ^{id}*A.RAD KUR za-mu-a ana paṭ gim-ri-ša ša KUR É-a-di-ni u KUR ḫat-te*
r. 16 *u ša* ^{m^I(UD)}*li-bur-na KUR pa-ti-na-a-a al-qa-a ina lib-bi ú-ša-aš-bit*
r. 17 *ÍD-tu TA* ^{id}*za-ba AN.TA aḫ-ra-a* ^{id}*pa-ti-ḪÉ.NUN*
r. 18 *MU-ša ab-bi* ^{giš^I(DÍŠ)}*KIRI₆^{meš} ina li-me-tu-ša az-qup GURUN^{meš}*
r. 19 *DÛ.A.BI GEŠTIN^{meš} a-na aš-šur EN-a u É.KUR^{meš} KUR-a BAL DU₆ la-be-ru*
r. 20 *lu-ú ú-na-kir₇ a-di UGU A^{meš} lu-ú ú-ša-píl*
r. 21 *I-ME* ²⁰*tik-pi ana muš-pa-li ú-ṭa-bi BĀD-šú ana eš-šú-te a[r-šip]*
r. 22 *TA URU* ⁴*šú a-di gaba-dib-bi-šú ar-šip ú-šak-lil É.G[AL]*
r. 23 ^{giš}*e-ri-ni* ^{giš}*ŠUR.MĪN* ^{giš^I(PA)}*dáp-ra-ni* ^{giš}*TÁŠKARIN* ^{giš}*mes-kan-n[i]*
r. 24 *É.GAL* ^{giš}*bu-uṭ-ni u* ^{giš}*ṭar-pi-’i ana šu-bat MAN^{ti}’a’ [(vacat)]*
r. 25 *ana mul-ta-’i-it EN-ti-<a> ina lib-bi ad-di ‘ú’-[ma-am]*
r. 26 *KUR^{meš} u A.AB.BA^{meš} ša pi-li BABBAR-e u* ^{na4}*p[a-ru-te]*
r. 27 *ina KĀ-ša ú-ša-zi-iz ú-si-im ú-š[ar-riḫ si-kàt kar-ri ZABAR]*
r. 28 *al-me-ši* ^{giš}*IG^{meš} giš* ^{giš}*e-ri-ni* ^{giš}*Š[UR.MĪN* ^{giš}*dáp-ra-ni]*
r. 29 ^{giš}*mes-kan-ni ina KĀ-ša ú-re-te* ^{giš}*GU.ZA^{meš} giš* *ESI]*
r. 30 ^{giš}*TÁŠKARIN* ^{giš}*BANŠUR^{meš} ZU^{meš} u* ^{giš}*ḫu-za-te KÛ.BABBAR^{meš}*
r. 31 *KÛ.GI^I(ZI)^{meš} AN.NA^{meš} ZA[BAR^{meš} AN.BAR^{meš}]*
r. 32 *KUR-ti ŠU [(vacat)]*

Translation²⁸

¹⁻¹²Ashurnasirpal, great king, strong king, [king of the world, king of Assyria, son of Tukultī-Ninurta], great king, strong king, king of the world, king of Assyria, [son of Adad-nīrārī, great king,] strong king, king of the world, king of Assyria, [valiant] man [who] marches [with the support of Aššur], his lord, and has no rival among the rulers [of the four quarters, marvellous shepherd, fierce in] battle, mighty flood-tide which [has no] opponent, [the king who subjugates] those insubordinate to him, who [rules] all peoples, [mighty man] who treads on the necks of his enemies, who tramples [all foes], who breaks up armies of the arrogant, [who] marches [with the support] of the great gods, his lords, and has conquered [all] lands, ruled all mountain ranges and [received their tribute], capturer of hostages, who sets victory over [all lands].

^{13-31a} When Aššur, the lord who calls my name (and) makes my sovereignty supreme, set his merciless weapon upon [my lordly] arms, I slaughtered the extensive armies of the land of Lul-lumê in the midst of battle. With the aid of Šamaš and Adad, my divine supporters, I thundered

²⁸ In cases when the inscription is broken mid-way through a word I have elected not to represent the break accurately in the translation in order to make it easier to read. In those places where a word has been completely lost, I have included the customary square brackets.

over the armies of the lands of [Nairi], the land of Ḫabḫu, the land of Šubarû and the land of Nirbi like Adad the destroyer. The king — who subjugated from the opposite bank of the Tigris to the city of Carchemiš of the land of Ḫatti, the land of Laqê in its entirety, the land of Suḫu to Rapiqu — conquered (territory) from the source of the Subnat River to the interior of the land of Nirbi. I brought within the boundaries of my land (the regions) from the mountain passes of the land of Kurruru to the land of Gilzānu, from the opposite bank of the Lower Zab to Tīl-Bāri which is upstream from the city of Zaban, to Tīl-ša-Zabdāni <and> Tīl-ša-Abtāni, Ḫirmu (and) Ḫarutu (which are) fortresses of the land of Karduniaš. I counted (the inhabitants) from the mountain pass of Babite to Ḫašmar among the people of my land. Over the lands which I rule I installed an imperial administration. They entered servitude (and) I imposed upon them *corvée*.

31b-r. 10a Ashurnasirpal, attentive prince, who fears the great gods, ferocious dragon, who conquers cities and mountain ranges to their very borders, king of lords, who encircles the insolent, exalted, merciless, who rattles resistance, king of all rulers, king of kings, attentive purification priest, appointee of the warrior Ninurta, overpowering divine weapon of the great gods, the king who always acts justly with the help of Aššur and Ninurta, his divine supporters and subjugated difficult mountains and enemies hostile to him, the totality of their lands, he constantly contends with the enemies of Aššur, above and below, and he fixed tax and tribute upon them.

Ashurnasirpal, strong king, appointee of Sin¹ (text: the gods), favourite of Anum, beloved of Adad the all-powerful one of the gods, merciless weapon who slaughters the land(s) of his enemies, I, the king, able in battle, despoiler of cities and mountain ranges, foremost in battle, king of the four quarters, who defeats his enemies, I subjugated fortified lands, dangerous mountain ranges, and fierce and merciless kings from east to west and placed (them) under a single authority.

r. 10b-r. 32 The ancient city of Calah which Shalmaneser (I), king of Assyria, a prince who preceded me, had built — this city had become dilapidated and it lay dormant (and) it had returned to mounds and ruins. I built this city anew. I took the conquered people from the lands which I rule, from the land of Suḫu, the land of Laqê in its entirety, Sirqu (at) the crossing of the Euphrates River, the land of Zamua to its very borders, from the land of Bīt-Adīni and the land of Ḫatti and from Liburna, the Patinian, and I settled therein (*i.e.* in Calah). I dug a canal from the Upper Zab (and) named it “The Canal of Abundance.” I planted orchids in its environs. I offered fruits of every kind (and) wine to Aššur, my lord, and the temples of my land. I cleared away the ruined mound and dug down to the water table. I sank (the foundation pit) to a depth of 120 layers of bricks. I built its wall anew. I built (and) completed it from its foundation to its parapet.

Inside I constructed a palace hall of cedar, cypress, juniper, boxwood (and) *meskannu*-wood, (and) a palace hall of terebinth and tamarisk for my royal residence (and) <my> lordly leisure. I erected at its gates white limestone and [alabaster animals] of the mountains and seas. I decorated and glorified (it and) I surrounded it (with)[knobbed nails of bronze]. I installed doors of cedar, [cypress, juniper (and)] *meskannu*-wood on its gate. [I took in great quantities and set therein thrones of ebony and] boxwood, tables inlaid with ivory, [silver,] gold, tin, bronze [(and) iron], booty {from the lands over which I} gained {dominion} (*vacat*).

Philological notes

General

The script of IA5.034 is typical of ninth-century royal inscriptions. Signs that typically feature diagonal wedges on clay often have those wedges arranged horizontally: BA and SU (ll. 18, 21, 22, 24 and 27) are good examples of this palaeographic practice, so too are KAR (l. 20), BAN (l. 25), BU (l. 30), QA (l. 33), TUK (l. r. 6) and MUŠ (l. r. 21). Peculiar is the writing of the URU-sign. In the first 25 lines the scribe used the form typically found in Neo-Assyrian texts on a wide variety of media. However, from l. 26, there is a transition to the form found occasionally on stone monuments (ll. 26, 28, 32). Interestingly, l. 26 contains both the standard form and the form found on stone monuments. One wonders whether this is evidence of the work of more than one scribe or more than one stone mason.

The text of IA5.034 varies regularly from the best published exemplar (BM 90868). This is not particularly surprising since the other published exemplars also vary considerably from BM 90868,²⁹ and Grayson has pointed out that BM 90867 (his exemplar no. 2) contains a number of scribal errors.³⁰ Interestingly, our text, which is of a comparable length to BM 90867, is not free of errors either and notes on these errors appear in the comments below. Errors aside, there is also variation across the published exemplars in terms of line divisions, choice of sign (*e.g.* ŠA vs. ŠÁ) and the spelling of words logographically or syllabically (see table 1). This is consistent with de Filippi's study of the Calah inscriptions which demonstrated that variation in sign selection and line arrangement were a feature of most texts from this site.³¹ A consequence of these observations is that no clear correlation of the process of composition can be identified between the published exemplars. Pending the publication of the other exemplars, one may tentatively conclude that the scribes of the Wall Inscription enjoyed the freedom to compose copies of the text using signs and spellings as they saw fit.

The line number in the tablet below relates to the edition of IA5.034. I have not included the line numbers for the British Museum tablets because King's edition includes only BM 90868. I have also not included those variants present in the parallel sections of the Standard Inscription and the Annals because these inscriptions were composed sometime after the Wall Inscriptions and do not shed light on the compositional relationship among the exemplars of this text.

Table 1. List of variants in published exemplars of the Wall Inscription

Line no.	IA5.034	BM 90868	BM 90867	BM 90975
2	GAL- <i>e</i>	GAL- <i>u</i>	GAL- <i>u</i>	GAL- <i>u</i>
4	<i>it-tal-la-ku-ma</i>	DU.DU- <i>ku-ma</i>	DU.DU- <i>ku-ma</i>	<i>it-tal-la-ku-ma</i>
5	<i>ša-ni₄-in-šu</i> <i>i-šu-ú</i>	<i>ša-nin-šu</i> <i>i-šu-ú</i>	<i>ša-nin-šu</i> <i>i-šu-ú</i>	<i>ša-nin-šu</i> <i>i-šu-ú</i>

²⁹ By "published exemplars" I refer to cuneiform hand copies published by King in Budge and King 1902, namely BM 90867, BM 90868 and BM 90915.

³⁰ Grayson 1991, p. 279.

³¹ De Filippi 1977.

Line no.	IA5.034	BM 90868	BM 90867	BM 90975
6	<i>gap-šú</i>	<i>gap-šu</i>	<i>gap-šú</i>	<i>gap-šú</i>
7	<i>kan-šu-ti-šú</i> <i>šá</i>	<i>kan-šu-te-šú</i> <i>šá</i>	<i>kan-šú-te-šú</i> <i>šá</i>	<i>kan-šú-te-šú</i> <i>ša</i>
10	DU.DU- <i>ma</i>	DU.DU- <i>ku-ma</i>	DU.DU- <i>ku-ma</i>	DU.DU- <i>ku-ma</i>
11	<i>ik-šu-du</i>	KUR- <i>ud</i>	KUR- <i>ud</i>	KUR- <i>ud</i>
14	<i>la-a pa-da</i>	<i>la pa-da</i>	<i>la-a pa-da</i>	<i>la pa-da</i>
15	ERIM ^{hi.a.meš} - <i>at</i>	ERIM ^{hi.a.meš} - <i>at</i>	ERIM ^{hi.a.meš}	ERIM ^{hi.a.meš} - <i>at</i>
18	<i>hab-ḫi</i> <i>ni-ir-bi</i>	<i>hab-ḫi</i> <i>ni-ir-be</i>	<i>hab-ḫi</i> <i>ni-ir-bi</i>	<i>hab-ḫi</i> <i>ni-ir-bi</i>
19	<i>iš-tu</i>	TA	TA	<i>iš-tu</i>
21	<i>ana</i>	<i>a-na</i>	<i>ana</i>	<i>ana</i>
25	URU ³² <i>za-ban</i> <i>u</i> is omitted	URU <i>za-bar</i> ^{an} <i>u</i>	URU <i>za-ban</i> <i>u</i>	URU <i>za-ban</i> <i>u</i>
26	uruDU ₆ - <i>šá-ab-ta-a-ni</i>	uruDU ₆ - <i>šá-ab-ta-ni</i>	uruDU ₆ - <i>šá-ab-ta-ni</i>	uruDU ₆ - <i>šá-ab-ta-ni</i>
27	KUR <i>kar-du-ni-dš</i>	KUR <i>kar-du-ni-šá</i>	KUR <i>kar-du-ni-dš</i>	KUR <i>kar-du-ni-dš</i>
28	<i>iš-tu</i> <i>né-re-be</i>	TA <i>né-re-be</i>	TA <i>né-re-bi</i>	TA <i>né-re-be</i>
29	KUR.KUR ^{meš}	KUR.KUR ^{meš} - <i>te</i>	KUR.KUR ^{meš}	KUR.KUR ^{meš}
30	GAR- <i>nu-te-a</i>	GAR- <i>nu-te-ia</i>	GAR- <i>nu-te-a</i>	GAR- <i>nu-te-a</i>
lo. ed. 2	KUR ^{meš} - <i>e</i>	KUR ^{meš}	KUR ^{meš}	KUR ^{meš}
r. 1	KUR.KUR- <i>šú-nu</i> <i>ana</i>	KUR.KUR ^{meš} - <i>šú-nu</i> <i>a-na</i>	KUR.KUR- <i>šú-nu</i> <i>ana</i>	KUR.KUR ^{meš} - <i>šú-nu</i> <i>a-na</i>
r. 3	d ₃₀ ¹ (DINGIR ^{meš})	d ₃₀	d ₃₀	d ₃₀
r. 4	<i>la pa-du-ú</i>	<i>la pa-du-u</i>	<i>la pa-du-ú</i>	<i>la pa-du-ú</i>
r. 8	<i>iš-tu</i>	TA	TA	TA
r. 9	GÌR ^{II} - <i>a</i>	GÌR ^{II.meš} - <i>a</i>	GÌR ^{II} - <i>a</i>	GÌR ^{II.meš} - <i>a</i>
r. 11	NUN <i>pa-ni-a</i>	NUN- <i>ú</i> <i>pa-ni-ia</i>	NUN <i>pa-ni-a</i>	NUN <i>pa-ni-a</i>
r. 12	<i>ana</i> GUR URU ¹ (GUR) <i>šu-ú</i>	<i>a-na</i> GUR URU <i>šú-ú</i>	<i>ana</i> GUR URU <i>šu-ú</i>	<i>ana</i> GUR URU <i>šu-ú</i>
r. 13	ŠU ^{II} - <i>a</i>	ŠU- <i>ia</i>	ŠU ^{II} - <i>a</i>	ŠU ^{II} - <i>a</i>
r. 14	URU <i>sir-qu</i> ³³	KUR <i>sir-qu</i>	URU <i>sir-qu</i>	URU <i>sir-qu</i>
r. 15	<i>šá</i>	<i>ša</i>	<i>šá</i>	<i>šá</i>

³² Grayson (1991, p. 280) notes that the exemplar in the Ashmolean Museum has a KUR sign instead of the URU.³³ Grayson (1991, p. 291) notes that the Ashmolean Museum exemplar also has URU rather than KUR before Sirqu.

Line no.	IA5.034	BM 90868	BM 90867	BM 90975
r. 17	<i>pa-ti-ḪÉ.NUN</i> ³⁴	<i>pa-ti-ḪÉ.GÁL</i>	<i>pa-ti-ḪÉ.NUN</i>	<i>pa-ti-ḪÉ.GÁL</i>
r. 20	<i>lu-ú ú-ša-píl</i>	<i>lu ú-ša-píl</i>	<i>lu-ú ú-ša-píl</i>	<i>lu-ú ú-ša-píl</i>
r. 24	<i>ana</i>	<i>a-na</i>	<i>a-na</i>	<i>ana</i>
r. 25	<i>ana</i> EN- <i>ti</i> -< <i>a</i> >	<i>a-na</i> EN- <i>ti</i> - <i>a</i>	<i>a-na</i> EN- <i>ti</i> - <i>a</i>	<i>ana</i> EN- <i>ti</i> - <i>a</i>
r. 31	KÙ.GI ¹ (ZI) ^{meš}	KÙ.GI ^{meš}	KÙ.GI ^{meš}	KÙ.GI ^{meš}

As to be expected, this text presents orthographic features common to royal inscriptions of the period, such as the free variation between vowel qualities /i/ and /e/.³⁵ However, attention should be paid to the writing of the I.C.s possessive suffix *-(i)a*. A general pattern can be observed regarding the use of *-ia* and *-a*. The IA-sign is used whenever the case ending preceding the pronominal suffix is not written, while the A-sign is used when the case ending is explicitly written. Hence:

Non-vocalic Ending with -IA	Vocalic Ending with -A
MU- <i>ia</i> (l. 13) KUR- <i>ia</i> (ll. 27 and 29)	MAN- <i>ti-a</i> = <i>šarrūtī-a</i> (ll. 14 and r. 24) <i>tik-li-a</i> (l. 17) ^{lu} GAR- <i>nu-te-a</i> = <i>šaknūtī-a</i> (l. 30) GIR ^{II} - <i>a</i> = <i>šēpī-a</i> (l. r. 9) EN- <i>ti</i> -< <i>a</i> > = <i>bēlūtī-a</i> (l. r. 25).

Two exceptions may be observed in l. r. 19 which contains EN-*a* (gen.) = *bēlīa* and KUR-*a* (gen.) = *mātīa*. It is unclear why this line deviated from the general practice, but it is one of the longer lines of the inscription and the scribe might have used the shorter form of the suffix because he was running out of room. Given the small sample size, this theory needs to be tested against the other exemplars, which the author has not been able to access directly.

Line specific comments

- 2–3. We find here an inconsistency in use of what Martin Worthington has termed the “honorific nominative.”³⁶ Most Neo-Assyrian royal inscriptions begin with either an invocation to the gods and/or the king, often in a genitive construction. However, the nouns and adjectives are usually declined in the nominative case instead of the genitive. Interestingly, IA5.034 uses the Assyrian form of the genitive GAL-*e* in the epithet for Tukultī-Ninurta II (*cf.* the forms in table 1 above), but then uses the nominative for Adad-nirārī II: “MAN *dan-nu*.” It seems our scribe has applied the honorific nominative inconsistently here.

³⁴ Grayson (1991, p. 222–223 and 281) notes that the Ashmolean Museum exemplar also records the name of this canal as *pa-ti-ḪÉ.NUN*. See the discussion in the commentary to l. r. 17 below.

³⁵ The Wall Inscription was a part of the corpus Deller (1957a, 1958b, and 1962) investigated in his influential studies on the language and philology of Neo-Assyrian royal inscriptions.

³⁶ Worthington 2012, pp. 190–198.

5. The sequence of signs: ŠÁ-NIN-IN-ŠU is unique to this exemplar of the text (see in table 1 above). I have elected for the uncommon reading of NIN as *ni*₄ because it is unclear to my mind why the scribe would have felt the need to provide a phonetic complement (or the other known orthographic practices used with CVC-signs) for a sign as common as NIN.
- 19–23. In these lines Ashurnasirpal is spoken about in the third person. The change from first to third person in Assyrian royal inscriptions has been understood elsewhere as the result of scribes compiling texts from existing royal inscriptions, campaign diaries and administrative lists.³⁷ Such an interpretation fits our text well for these lines seem to be a series of military epithets inserted within a summary of his conquest.
- 25–26. All other exemplars have a *u* conjunction between the toponyms ^{uru}DU₆-šá-m^za-ab-da-ni and ^{uru}DU₆-šá-ab-ta-a-ni. While it is possible that our scribe might have elected for an asyndetic construction instead of the use of a conjunction, the frequent errors in this inscription suggests the omission of the U-sign at the end of the l. 25 is a copying error.
27. The form of the NA-sign, which is quite common in ninth century royal inscriptions on stone, is a *hapax* in this inscription. In every other case the form of the NA-sign is that which is found on clay and other media in most periods of Mesopotamian history.
- r. 3 Our text has DINGIR^{meš}, but every other exemplar has ^d30. This seems to be a lapidary error where the EŠ-sign has been confused with a MEŠ — a difference of a vertical and a horizontal wedge (*i.e.* the ME-sign).
- r. 12 There is a repetition of a GUR-sign in this line where all other exemplars have GUR URU. This is either a dittography or the stonemason misread the sign.
- r. 13 Our text has what appears to be a copying error. All other known exemplars have UN^{meš} where our text has MA.ŠÁ^{meš}. I know of no attestation of a logogram MA.ŠÁ (or alternatively MA.GAR) and, given that the UN-sign is used in the other exemplars and parallel passages in the Standard Inscription and the Annals,³⁸ we most likely have an occurrence of a lapidary error. The stone mason has probably misunderstood the series of horizontal wedges at the beginning of UN for MA and the vertical wedges at the end of UN for ŠÁ.
- r. 16 The scribe or stone mason has placed two *Winkelharken* before the expected DIŠ-sign before the name Liburna, which results in an incorrect UD-sign.
- r. 17 Most exemplars write the name of the canal as *patti-hegalli*(HĒ.GÁL), but in this copy it is written as *pa-ti-HĒ.NUN*, which is read *patti-nuḫši*. As King and Grayson have pointed out, *nuḫšu* and *hegallu* are synonymous which indicates that the canal went by different names, and as mentioned earlier, the canal also went by *bābelat-hegalli*.³⁹ Both *nuḫšu* and *hegallu* were used with reference to water, but *nuḫšu* is more common and was even used in the titulary of Hammurapi who described himself as “one who provides his people with abundant water”.⁴⁰ The writing of ‘abundance’ for the name of this canal with HĒ.NUN was previously known from the Ashmolean Museum exemplar and BM 90867.⁴¹ We may now add IA 5.034 to those exemplars and argue that *patti-nuḫši* is an equally legitimate, though less common, rendering of the name.

³⁷ See Tadmor 1973, pp. 141–144; Levine 1981, p. 61; and Oded 1998, p. 425.

³⁸ A.O.101.1: iii 133 and 23: 15 in Grayson 1991, pp. 222 and 276.

³⁹ Budge and King 1902, p. 185; and Grayson 1991, pp. 222–223.

⁴⁰ *šākin mē nuḫši ana nišišu* (CH ii 40), see CAD N/II, pp. 320–321; and CAD H, p. 168.

⁴¹ So Grayson 1991, pp. 222–223.

- r. 18 DIŠ appears in this line in error of GIŠ, as attested in the other published exemplars.
- r. 23 The third GIŠ-sign in this line is crudely drawn with the two horizontal lines passing well beyond the vertical. The effect is a poorly drawn PA, but one can read this sign only as GIŠ.
- r. 25 EN-ti is missing the first person possessive pronominal suffix which, in keeping with this text and other exemplars, would have been written with the A sign rather than the IA sign (see discussion above).
- r. 31 The logogram KU.GI^{meš} is incorrectly written KU.ZI^{meš} here. The difference between the GI and ZI is the arrangement of the four diagonal wedges at the end of the signs.

Index of proper nouns

Adad	18, r. 4	Nairi	17
Anum	r. 3	Ninurta	35, lo. ed. 1
Assyria (<i>māt aššur^{ki}</i>)	2, 3, r. 11	Nirbi	18, 22
Aššur (god)	13, lo. ed. 1, r. 1, r. 19	Patina	r. 16
Ashurnasirpal (Aššur-nāšir-apli)	1, 31, r. 3	Patti-Nuḫši/Patti-Ḫegalli	r. 17
Babiti	28	Puratti	r. 15
Bīt-Adīni	r. 15	Rapiqu	21
Gilzāni	23	Salmānu-ašarēd	r. 10
Ḫabḫu	18	Sirqu	r. 14
Ḫarutu	26	Subnat	22
Ḫašmar	28	Suḫu	21, r. 14
Ḫatti	20, r. 15	Šamaš	17, r. 8, r. 9
Ḫirimu	26	Šubarû	18
Idiglat	19	Til-bāri	24
Kalḫu	r. 10	Til-ša-Abtāni	26
Karduniaš	27	Til-ša-Zabdāni	25
Kargamiš	20	Zaba elû	r. 17
Kirruru	23	Zaba šaplû	24
Laqê	20, r. 14	Zaban	25
Liburna	r. 16	Zamua	r. 15
Lullumû	15		

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Votive Objects and their Storage Areas in Urartian Fortresses

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Abstract

*The Urartian Kingdom is renowned for its exceptional mastery in metal production amongst Near Eastern cultures during the first millennium BC. The production of metal artefacts played such a pivotal and leading role that the Urartians became a strong rival of the Assyrian empire in both warfare and artwork. As a state tradition, a considerable quantity of metal artefacts was dedicated to the gods by the kings. These artefacts were kept in various Urartian fortresses. Little information is available, however, regarding where and in what manner they were kept within these fortresses. This paper aims to decipher the designated areas for the votive objects regarding their location, architecture and archaeological find contexts.**

Introduction

Significant historical events in ancient Near Eastern cultures at the beginning of the ninth century BC were closely linked to developing iron technologies. The pre-Urartian population, which had been obliged to pay tribute to the powerful Assyrian Empire up until the first quarter of the ninth century BC, had become a large and powerful political organisation. The Assyrians experienced trouble in their dealings with them owing to the iron, bronze or bimetallic weapons that they produced, along with their organised military power. Weaponry and militarism, so fundamental to Urartian success, became embedded in Urartian religious beliefs, both in the

* Altan Çilingiroğlu, who is the director of Ayanis excavations and also my doctoral supervisor, enabled me to study Ayanis materials which are recorded in the Van Museum inventory. I am extremely grateful to him for his support and encouragement during my 16 years at the Ayanis excavations. I would like to express my gratitude Antonio Sagona for his encouragement and valuable discussion of this article. Oscar White Muscarella deserves special thanks for providing very useful feedback and improvements. This paper benefited from comments by Ursula Seidl on Urartian bronzes, Mirjo Salvini on Urartian inscriptions, Nicolas Wyatt on divinity, Mahmut B. Baştürk on Ayanis, Can Avcı on Upper Anzaf, Yervand Grekyan, Miqayel Badalyan and Roberta Dan on Karmir-blur, Stephan Kroll and Paul Zimansky on Bastam, and Mehmet Karaosmanoğlu on Aluntepe. Y. Grekyan and M. Badalyan also provided numerous sources in Russian and in Armenian; this paper would not have been as successful without their contribution. I am indebted to Serkan Acar, who assisted me by translating Russian sources. Special thanks go to Yeşim Batmaz, my wife, for her careful reading of the initial draft of this paper, and her endless support in every section of the present work. I am grateful to Serap Kuşu for 3D reconstruction of storerooms in the temple area at Ayanis. I am in debt to Simon Young and Jarrod Paul for their hard work to improve the English in the paper. Ece Sezgin who is a member of Ayanis Excavation deserves special thanks for her assistance during this study. Finally, I would like to thank my friends, students and other excavation members whom I cannot acknowledge individually, who laboured over various sections of the Ayanis excavations. All failings in this paper are, of course, my own.

symbolic sense and as part of the ritual paraphernalia. The most compelling evidence of this is that Ȧaldi, the chief god of the Urartian pantheon, was also the war god. The militant identity of Ȧaldi was described not only in an array of monumental cuneiform inscriptions on stone, announcing that “The god Ȧaldi set out with his *šuri*” (spear/weapon), “The god Ȧaldi is mighty/victorious(?), Ȧaldi’s *šuri* is mighty/victorious(?)” (*DȦal-di-ni ũš-ta-be ma-si-ni* ^{GIS}*šuri-i-e* *DȦal-di-i ku-ru-ni* *DȦal-di-ni* ^{GIS}*šuri-i ku-ru-ni*),¹ but also in depictions such as the Anzaf Shield.² Therefore, it might be inferred that the god Ȧaldi was both a military and spiritual leader of the Urartian army. Ȧaldi’s weapons were considered sacred in Urartian religion.³ This fact might explain a series of inscriptions: the 13th line of the Meherkapı inscription,⁴ the Yeşilalıç inscription,⁵ inscriptions on the blocks of *susi* at Karmir-blur,⁶ and the temple inscriptions of Ayanis,⁷ all of which proclaim the sacrifices to be made to “Weapons of Ȧaldi”, *DȦal-di-na-ũ-é TIL-LI*^{MEŠ}. These inscriptions match up with archaeological finds. The large number of weapons that were among the thousands of metallic objects unearthed in consecutive contexts of Urartian fortresses is striking.⁸ Some of these weapons have inscriptions that state they are votive objects dedicated to Ȧaldi (see **Tables 1** and **2**). The main objective of this study is to examine and define the archaeological problems regarding Urartian votive objects and areas where they were kept. In what type of rooms were the votive objects for Ȧaldi protected, and what was the position of these rooms? This paper will pursue answers to these questions, dealing in particular with Ayanis material. It will not discuss the findings of unknown provenance, only those from systematically excavated fortresses.

Although fortresses are normally thought of as military facilities, given that only a large number of soldiers would occupy such places, considerable quantities of decorated and/or inscribed weapons were unearthed from fortresses. Fortresses also had religious functions.⁹ What is referenced in the Urartian experience is not a settlement surrounded by fortification, but rather a bastion which was ultimately intended to become a military unit. In the inscriptions, the word *É.GAL* repeatedly appears, which suggests “fortress”, although this meaning is ambiguous. This is an important point for us, as most fortresses which are discussed here are labelled *É.GAL*, excluding one; namely, Karmir-blur. Apart from having a military meaning, this term might also be associated with the concept of administrative authority and palace. To sum up, *É.GAL*, which we generalise as “fortress”, must have evolved from a broader concept signifying the unity of military and administrative élite.¹⁰

¹ See the inscriptions: Išpuini-Minua: CTU I A 3–4,9; Minua: CTU I A 5–1,3,5,11; Argišti II: CTU I A 8–1, 2, 3; Sarduri II: CTU I A 9–3.

² Belli 1998, fig 17.

³ See the inscriptions: CTU I A 3–2; Ayanis temple inscription: CTU I A 12–2 I; Meherkapı inscription: CTU I A 3–1.

⁴ CTU I A 3–1.

⁵ CTU I A 3–2.

⁶ CTU I A 12–2 I.

⁷ CTU I A 12–1 I.

⁸ Çilingiroğlu 2005, pp. 31–38; 2012, pp. 305–306.

⁹ Çilingiroğlu 2011b, pp. 188–201.

¹⁰ For the argument, see Zimansky 1985, p. 62.

Definitions and Problems

A very good expression of an *Ē.GAL* is the Ayanis Fortress. Gate inscriptions announced that Rusa (685–653 BC) son of Argišti built an *Ē.BÁRA* (a shrine) and an *Ē.GAL* in front of Mount Eiduru (Süphan):

*Through the greatness of Haldi, Rusa, the son of Argišti, has built this fortress to perfection in front of the mountain Eiduru. Rusa says: the rock was <untouched>, nothing was built here (before). I built a shrine as well as a fortress (Ē.GAL), perfectly. I set new vineyards and orchards and founded a new town (settlement) here. Strong accomplishments I made here. Through the greatness of Haldi (I am) Rusa, the son of Argišti, mighty king, great king, king of the land of Biainili, lord of the Tušpa-City. Rusa says: whoever my name erases (and) puts his (own) name, may Haldi and the Storm God and the Sun god annihilate him.*¹¹

Ayanis Fortress, as an *Ē.GAL* which contained magazines, domestic and religious areas, must have been built as an administrative and cult centre surrounded by substantial fortifications. Metal artefacts of various types — in particular weapons, numbering into the thousands — have been excavated. Although weapons were unearthed throughout the fortress, they were concentrated mostly in the temple area.¹² As with Ayanis, quite a number of inscribed weapons have been found at other excavated Urartian fortresses, in various contexts including the temple areas. Owing to the fact that votive inscribed weapons were recovered from temple areas, it has been assumed that many precious objects might have been offered in rituals performed for the god Haldi within the temples of Urartian fortresses.¹³ In other words, bronze objects with laconic and repetitive inscriptions dedicated to the god Haldi can be identified as “votive objects”. An exception to one- or two-lined Urartian inscriptions is the bronze rings bearing Assyrian inscriptions, which have been excavated in the Upper Anzaf Fortress.¹⁴ In fact, textual evidence from Urartian bronzes discloses two main objectives.¹⁵ First, inscriptions state that ownership belonged to the treasury of a king, and second, they announce that the king dedicated the bronzes to Haldi (see Table 1). It is clearly stated that they were offerings to the god Haldi (“To Haldi his lord, (king name), dedicated”), *Ḫal-di-e EN-ŠU...(king name) uš-tú-ni* or *Ḫal-di-e EN-ŠU...(king name) NÍG.BA*.¹⁶ This suggests that the bronzes were holy possessions and the sacred property of the god Haldi.¹⁷ In certain cases, inscriptions reveal where and why they were dedicated, and since a king’s name is always given, dating is possible.

Not all inscribed metal objects were votive. Inscriptions declaring only royal ownership, for instance, were not votive, apart from a couple of exceptions. These exceptional inscriptions have two key words: *Ē.úrīšḫusi*,¹⁸ translated as “treasure house” by M. Salvini.¹⁹ *Ē.úrīšḫusi* is observed

¹¹ Salvini 2001a, pp. 251–252.

¹² For the chemical analysis of the weapons from Ayanis, see Faraldi *et al.* 2013.

¹³ Çilingiroğlu 2005, pp. 31–37; 2012, pp. 305–306.

¹⁴ CTU IV B 2–7 A–E.

¹⁵ For the catalogues of bronze objects, see Seidl 2004, pp. 1–44.

¹⁶ See Seidl 2004, pp. 45–53.

¹⁷ Çilingiroğlu 2012, p. 305. This topic will be discussed at the end of this article.

¹⁸ M. Salvini states that it derived from *ú-ri-iš-ḫi*. Salvini (1980, pp. 185–188) prefers to translate words “*úrīšḫi*” or “*úrīšḫusi*” as “property” or “treasury”. For the derivatives of this word see Salvini 1980, pp. 185–186; Seidl 2004, pp. 45–47; CTU IV B, pp. 13–14.

¹⁹ M. Salvini, personal communication 2013.

only on bronze objects and is associated with É *TIL-LI*, a storage building perhaps for precious objects, or a house of weapons.²⁰ An inscription on a door fitting found in Karmir-blur can be read as “(object) *treasury room of Rusa, son of Argišti in the city of Teišeba*”.²¹ Similarly, door rings and attachments from Upper Anzaf with two-line inscriptions state “*Treasury of Argišti son of Sarduri*” and “*Treasury of Sarduri*”.²² It has been argued that in both inscriptions on the door rings of Upper Anzaf, *úrišḫisi*, which is translated as “treasury”, must have been an erroneous transcription of *úrišḫusi*.²³ Whereas Ursula Seidl does not oppose the translation of É *úrišḫusi* as “treasure house”, she offers the alternative term “magazine”, which suggests general storage purposes.²⁴ The reason behind this interpretation is the find-spot of the door fittings discovered in Room 11 at Karmir-blur (Fig. 1). This room is located in a complex where cereal, metal tools, were stored. Similarly, Corridor 10 in Upper Anzaf (Fig. 3), whence the door fittings came, is defined as the main corridor between the storerooms, measuring 46 m long and running in a north-south direction.²⁵ It is immediately obvious that either of the inscribed door fittings might be connected to the storage areas. In this respect, the term “magazine”, which has a general meaning, is acceptable as a neutral equivalent of “storeroom”.

The word “*tanaši*” (*ta-na-a-ši*) is another term representing ownership. It appears on a bronze bowl, a gold object belonging to queen Qaquli from Ayanis, and a tripod candelabrum from Toprakkale.²⁶ Mirjo Salvini has translated this word as “property”.²⁷ One more word may be included here, namely, *ša* meaning “of”. It is implied that votive objects and personal property were separated. Even so, there is room for doubt. Two bronze shields from Karmir-blur have two-lined inscriptions (see KB. 1 and 2 in Table 1). Whereas the first line mentions that they belong to the treasury of Argišti (*úrišḫusini*), the second line states that they were dedicated to Ḫaldi by Argišti (786–764 BC).²⁸ Perhaps these shields first belonged to the king and once they were consecrated they became votive offerings. Several more examples indicate such a meaning of the votive objects, as will be discussed below. Obviously, those objects that had royal inscriptions were also created in royal workshops at the demand of the king.

In turn, the inscribed votive objects, as can be seen in Tables 1 and 2, consist of shields, helmets, quivers, swords, arrowheads, spearheads, lances (*GIŠšuri*), candelabra, mushroom-headed nails (*sikkatu*), armour, rings and cylindrical disks. It is not surprising that shields and helmets make up the majority, since they have not only have a military purpose but also a broad area to accommodate an inscription. Various other metal votive objects, however, as listed above, have been unearthed in the same area, including weapons dedicated to Ḫaldi. The large rings were seemingly an early tradition, used only in the period of Išpuini (825–810 BC) and the co-regency

²⁰ See Salvini 1980, pp. 185ff. Belli and Salvini 2010, pp. 44–45; CTU IV B, pp. 13–14 for discussions. Melikishvili translated this building (UKN I 283) as an armoury, a house of weapons. Also, see Seidl 2004, pp. 45–46; Piotrovskii 1969, pp. 136–137.

²¹ CTU IV B 12–15; Seidl 2004, p. 46.

²² Belli *et al.* 2005, p. 219; CTU IV B 9–31.

²³ Belli *et al.* 2005, p. 219.

²⁴ Seidl 2004, p. 46.

²⁵ Belli *et al.* 2005, p. 117.

²⁶ CTU IV B 12 17–18, 12A.

²⁷ CTU IV B, p. 14.

²⁸ CTU IV B 8 1–2.

of Išpuini and Minua. Conversely, personal belongings of the kings were of much more diverse types, such as cups, armlets, belts, pectorals, shield umbos, and horse fittings such as harnesses and blinkers, frontal plates and bells, which never bear votive inscriptions.

So far, only inscribed objects have been discussed. When it comes to the objects without inscriptions found in similar contexts, certain questions arise. Is it possible to consider them votive objects? One must be cautious when searching for a precise answer to such a question and must consider the reliability or otherwise of find-spots and contexts. In Room 4 in the temple area of Ayanis Fortress (see **Fig. 6**, **Tables 3c** and **5**), for example, several shields were recovered, stacked one on top of the other. Whereas one of these shields has a cuneiform inscription with no decoration, others have highly skilled artistic decorations with no inscription. In the same context, a shield with neither decoration nor inscription has been found. The shape of the shields does not differ from one to the other: all three have three handles, and they are more or less alike in terms of their form, size, thickness and production technique. It is known, then, that these artefacts shared the same context, but it is still unclear if they had the same function and meaning. The shields found at Ayanis, for example, vary between 1 mm and 5 mm in thickness. Of the three decorated shields, two are 1 mm, whereas one, the lion-headed shield, is 3 mm. Generally speaking, while inscribed shields are between 1 and 2 mm, plain ones are between 2 and 4 mm in thickness.²⁹ A thickness of 4 mm seems enough for utilitarian purposes, this it is difficult to prove that all the shields found in the temple vicinity did not have the capability to be used in actual war.

Certain artefacts might have had purely utilitarian purposes. A bronze cauldron and two jars, both full of millet, found in the Ayanis temple storerooms, for instance, cast doubt on the view that all the finds in the storerooms were votive. They seem to be simply a part of the paraphernalia of ongoing activities in the storerooms and are connected to the rituals performed in the temple area. Finally, how do we interpret the fibula, bronze plates, and a bracelet? Recovered from the temple context, unless, of course, they fell from the upper floor, it is easy to assume they were temple property.

An array of inscribed bronze objects, such as sword fragments, votive rings, arrowheads and so on, was found in the Upper Anzaf Fortress (see **Tables 1–4**) and indicates that votive objects made for Haldi date back to the Išpuini period (the second half of the ninth century BC),³⁰ whereas shields with inscriptions of the last Urartian kings found at Toprakkale³¹ indicate that these objects continued until the end of the kingdom. Hence, the practice of producing dedicatory objects was continuous and embedded within Urartian religious beliefs and practices. To date, no votive object ascribed to Sarduri I (832–825 BC) and recovered from excavations has been attested.³² For the time being, we can only assume that the practice of dedicatory objects began in the royal workshops during the reign of Išpuini and then the co-regency. This period can also be defined as a formative period, in which the kingdom attained its character and identity.³³ Upon an examination of the corpus of Urartian inscribed metal objects, it can be clearly seen that inscribed bronze objects were produced intensively in the reigns of Sarduri II (764–734 BC),

²⁹ Reindell 2001, p. 282; Seidl 2004, p. 87; Batmaz 2013.

³⁰ CTU IV B 2.

³¹ Barnett 1950, pp. 13–16, fig. 8–9; Barnett 1972, pp. 163–168, fig. 1–4; Wartke 1990, pp. 46–58, abb. 2–7.

³² CTU IV B 1.

³³ Belli 1991, p. 45.

Argišti I (786–764 BC) and Rusa II (685–653 BC) (see **Tables 1** and **2**).³⁴ In the period following Rusa II, a sharp decrease in production of inscribed objects can be observed. The reason behind this decline is that the kingdom was gradually being undermined economically and administratively.

We also need to highlight certain points of nomenclature on this subject. It is necessary to clarify whether the area where the objects were found might sometimes be defined as “arsenals”.³⁵ Were they really arsenals serving military purposes, or were they chambers where certain objects dedicated to Haldi were stored? Both of these views are compelling as most of these objects were weapons and correspond to his military character. How, then, should we understand the term “arsenal”?

The votive items were mostly dedicated to the god and must have been stored in sealed and secured storerooms.³⁶ Therefore, as may be understood from various parts of this paper, defining these storage areas as “arsenals” causes confusion. “Arsenal” suggests an area specifically for equipping soldiers, but it is not the context here unless the term has a metaphorical meaning. It might be more accurate, therefore, to call these rooms “storage areas for votive objects” or to use the term “treasury rooms” as a more general concept. However, if we consider the great quantity of arrowheads found in the Ayanis temple, it seems unlikely that none of them were produced for military purposes.

All things considered it is difficult to identify physically the rooms that hosted votive objects in the fortresses. In some cases, such as Bastam, Çavuştepe and Altintepe, it is possible that the rooms were plundered at the time of their destruction or afterwards, or alternatively that the occupants of the fortresses removed the precious items, because they were found quite empty. Another situation can be seen at Erebuni, where the artefacts were moved to another fortress (see below). On the other hand, it is logical that treasury chambers, expected to be looted first, were moved to more protected and secure locations within a fortress to guard against theft. At some fortresses, estimated to have undergone destruction during a devastating earthquake in the Van region, most of the precious items were buried under the debris and survived looting by luck. Altan Çilingiroğlu,³⁷ for example, thinks that Ayanis Fortress collapsed due to severe earthquakes, whereas M. Salvini³⁸ notes that the temple of Ayanis was in perfect condition after the excavations. Regardless of how the fortress was destroyed, many findings in the courtyard and storerooms were sealed by architectural debris, so the assemblage beneath it was preserved.

Problems regarding this subject are plentiful, yet most of the fortresses (see **Map**) shed no light on these questions. For example, Arutjun A. Martirosyan asserts that the temple complex and treasury chambers of Armavir (Argištiḫinili) were robbed, which is why no votive objects were discovered.³⁹ It can be clearly understood from the inscriptions that Sarduri son of Argišti built

³⁴ CTU IV B, pp. 11–119.

³⁵ Belli 2003, pp. 9–10; Belli *et al.* 2004, p. 3; Belli and Ceylan 2005, p. 179; Belli 2007a, p. 196.

³⁶ The records of the Eighth Campaign of Sargon II mentioned that he had opened all the seals of the treasures of the storerooms. Foster 2005, p. 809. Çilingiroğlu (2012, p. 305) thinks that these storage facilities were controlled by priests.

³⁷ Çilingiroğlu 2001, p. 40; 2011a, p. 339.

³⁸ M. Salvini, personal communication 2013.

³⁹ Martirosyan 1974, pp. 139, 143.

a Țaldi gate there (^Dhal-di-ni-li KÁ-li) and a *susi*.⁴⁰ As in the vast Țaldi *susi*, weapon offerings must have been made in the Armavir temple as well. Additionally, it is almost certain that Arinberd Fortress (Erebuni) was abandoned when the inhabitants moved to Karmir-blur (Teiřebai URU), since inscriptions on some of the objects unearthed from Karmir-blur indicate that they were dedicated to Țaldi the city of Er(e)buni by Minua (810–786 BC), son of Iřpuini and Argiřti, son of Minua (see **KB. 2–4** and **16** in **Table 1**).⁴¹ Incomplete excavations at K r  t, Aznavurtepe, Kayalidere, Toprakkale (Rusa inili Qilbani=kai) and Kef (Țaldiei URU ^{KUR}Ziuquni) fortresses (see **Map**) are not particularly useful in helping to overcome the lack of information. Even though it was proposed that three rooms in the temple complex at Altintepe might have served as store-rooms in the temple area,⁴² there is insufficient evidence to support this opinion. By contrast, during the earlier excavations at Altintepe, a great many artefacts identified as votive offerings were excavated, including numerous iron and bronze spearheads, sceptres, mace heads, and iron arrowheads. In addition, by the door of the southern portico, many weapons described as votive, such as a conical helmet, a shield, iron and bronze spearheads, and arrowheads were also recovered. It is reported that in the same location ivory ornaments, a tripod bronze table, and door rings were unearthed. Tahsin  zg  c explains these three rooms as follows:

The rooms measure 6.50 × 5.00 m., 6.50 × 14.50 m., and 6.50 × 5 m. respectively. No objects were found in them, the rooms evidently having been emptied before being abandoned. The first (northern) square room had been built with special care and attention. Its mudbrick walls rested on a well cut stone socle, were 30 cm. in height. Paintings adorned its walls. The three west rooms were undoubtedly used in connection with cult ceremonies.⁴³

When it comes to Bastam Fortress (Rusai URU.TUR), the location of the temple could not be securely identified even though a significant portion of the fortress is excavated. This is because the area where the temple is thought to have been located slipped down the hill and disappeared.⁴⁴ It is suggested that a terrace located south of the storage rooms in the middle citadel was the most probable location to construct a temple, owing to its dimensions.⁴⁵ Another thing we know about Bastam is that the fortress was evacuated like Altintepe,⁴⁶ sometime before it was destroyed. Therefore, it was not possible to find the high number of weapons expected, either in a room connected to the temple or other independent rooms.

Contexts

Contexts where votive objects were found vary, with the most definitive evidence coming from the Upper Anzaf,  avuřtepe, Karmir-blur and Ayanis fortresses. Therefore, it is important to examine the evidence we have in order to shed light on the questions asked above.

⁴⁰ CTU I A 9–15, 9–16.

⁴¹ Piotrovskii 1959, pp. 177–181; 1967, pp. 93–94; 1969, p. 71; CTU IV B 8–2/8–7.

⁴² M. Karaosmano lu, personal communication 2013.

⁴³  zg  c 1966, p. 42.

⁴⁴ Stephan Kroll and Paul Zimansky, personal communication 2013; see also Salvini 2005, pp. 371–375.

⁴⁵ Kroll 1972, p. 294; Kleiss 1978, p. 52.

⁴⁶ Kleiss 1980, p. 303 (Bastam);  zg  c 1966, p. 2, 38; 1969, pp. 3, 59 (Altintepe).

Ayanis (Rusaḫinili Eiduru=kai)

The Ayanis Fortress excavations provide unambiguous evidence because of the integrity of the storerooms for votive and other objects within the temple.⁴⁷ The storerooms at Ayanis have an almost rectangular or square form constructed to a depth of between 5 and 6 m from the ground level of the temple courtyard (Figs 6, 7). This depth must have been chosen in order to construct the walls on the bedrock. The structures, which are represented by the seven rooms currently excavated, are sequenced in an east-west direction along the southern wall of the temple (Figs 6, 8). The last room to the east is situated against the eastern wall of the temple, with no entrance yet exposed here. Access to the rooms is provided by another room that extends in parallel with the eastern wall of the temple in the southeastern section of the temple courtyard. The level of the bedrock deepens towards the southern section of the temple courtyard and, in this way, an area allowing the construction of the rooms concerned was formed (Fig. 9). Therefore, it was necessary to raise the ground in the southern section of the temple area and construct the walls to divide the rooms. A thick platform, constituting the northern wall of the rooms beneath the temple floor, was concurrently designed to bear pillars (Pillars 7–10) sequenced in a row in the southern section of the temple courtyard (Fig. 9a).⁴⁸ In other words, the storerooms in the temple are located beneath the ground of the courtyard between the wall on which these pillars are located, and the northern wall of the temple. Owing to the presence of a sharp slope in this section of the hill, the andesite blocks of the pillars located in the southern section of the temple courtyard slid southwards from the ground on which they were situated, rolled into the rooms, and mostly prevented the excavators from reaching the floor (Fig. 10). It is apparent that common walls, with a thickness of at least 2 m, separated the rooms from each other, and that access was provided by doorways with a width of 0.9–1 m at their northern corners (Fig. 11). While the north-south lengths of the rooms are around 3.15/3.25 m, east-west lengths vary between 3.35 and 4 m. As also mentioned, the roof level of the rooms is at the ground level of the temple courtyard. The stones were compacted with a daub made of clay and mud on the thick partition walls of the rooms, with the structure consisting of round and rectangular wooden beams in the section, which were bound together and formed the roof (Figs 9b, 12). This ceiling was covered by several layers of mud bricks measuring 0.35 m × 0.5 m and was made level with the floor of the temple. Although the mud-brick walls of the rooms were constructed on the bedrock, they were sometimes stepped using a foundation that comprised large stone blocks in the areas where the bedrock sloped (Fig. 13). The aim of this practice must have been to adapt to the slope of the bedrock (Fig. 14). In order to obtain a level base in the topmost section of these stepped stone blocks, a layer of flat, wide stone slabs was placed with the mud-brick superstructure constructed over it. It was observed that the rooms had been exposed to intense fire and that their mud-brick walls were partially burnt. The ruins of the heavy roof beams affected by the fire were observed in the rooms at different levels. The roof, constituting wooden beams and a layer of several mud-brick blocks, made a deposit by collapsing in the rooms. This deposit strictly separates the findings preserved in the room from those which fell from the upper storey, literally the temple courtyard.

⁴⁷ Batmaz 2012.

⁴⁸ Çilingiroğlu *et al.* 2002, p. 289; Çilingiroğlu 2004a, p. 414; 2011a, p. 346.

The most interesting room architecturally is the Entrance Room, which provided the connection between the temple courtyard and the storerooms. An entrance to the room from the temple courtyard is provided from the north via a staircase (Figs 6, 9c). It is understood that the stone foundation of the western walls, stepped according to the slope, was also used to form the staircase system (Fig. 14). No alternative door leading to the rooms has been attested. Another important feature of the room is that it has two floor levels — high and low (Fig. 10). Access to the first and second levels from the temple courtyard is provided via a staircase built using the foundations of the western wall.⁴⁹ It has not been clarified whether the Entrance Room had a roof with a high ceiling, resting on Pillar 6 in the temple courtyard, or a roof formed at the floor level of the courtyard. Whichever method was used, it will be understood from the context of finds to be mentioned below that its top cannot have been open. A door located on the southern wall of the room is the only door known to have provided a passage to the rooms sequenced in a line eastwards. There is evidence that the walls of the rooms were plastered many times and painted blue. However, the conflagration destroyed both the walls and the floors, which had been made of hard-packed clayey soil. Low platforms that had been formed by compacting a kind of calcareous soil were found on the walls in some rooms, with remnants of shelves or wooden items, on which bronze plates would have been nailed. The broken alabaster fragments found in Room 4 are thought to have been from an alabaster platform and the ground pavement in the *cella*. It is possible that these remnants had been used as insulating materials in a drainage channel, unearthed in part of the northern wall of Room 4, which lay beneath the floor.

When the rooms are evaluated in terms of finds (Table 5), it can be understood that they played a great role in the formation of the weapon repertoire of the fortress (Table 6). Almost all votive objects unearthed were offered to the god Haldi by Rusa (Rusa II), son of Argišti. A tin-plated bronze helmet (Fig. 15, AY. 14 in Table 1)⁵⁰ and a shield (see AY. 13 in Table 1) from Room 4 are exceptions. The helmet carries a votive inscription ordered by Argišti, father of Rusa II and son of Rusa I.⁵¹ It is understood that about 10 complete or almost complete helmets discovered in this area came only from the Entrance Room and Room 4 (Table 5–6, Fig. 37). Of the helmets found, four were observed to have been decorated. The three helmets found in the Entrance Room carried a lightning relief motif (Fig. 16), and the helmet fragments in Room 4 carried relief crooks terminating in snakes' heads (Fig. 17).

It was seen that a significant number of the shields had been damaged — some were bent when they fell to the floor, or buckled from the intense heat during the conflagration, and some had even broken into pieces (Fig. 18). Of some 15 shields found, four of the complete shields and/or shield fragments carried cuneiform inscriptions. One of the inscribed shields was dedicated by Argišti, father of Rusa (AY. 13), whereas others were dedicated by Rusa, son of Argišti. Six shields came from Room 4 (Table 6, Fig. 37). Almost all shields have three iron and/or bronze handles. Apart from the undecorated shields (Fig. 19), several specimens with incised decorations were also unearthed. The most intriguing among them is a shield, weighing 8 kg with a diameter of 78 cm,⁵²

⁴⁹ Çilingiroğlu 2004a, p. 415.

⁵⁰ Çilingiroğlu 2011a, p. 350.

⁵¹ Salvini 2001c, pp. 279–280. Even though the inscription is not complete, Salvini has indicated that the helmet must be a votive based on the philological evidence.

⁵² Çilingiroğlu and Sağlamtimur 2003, p. 466.

obtained from Room 4 (Figs 20, 21). This shield also contains a decorative pattern, as is found on most other decorated Urartian shields, consisting of striding lions and bulls. Having been coated with tin and polished (Fig. 21), the shield is reminiscent of the silver shields Sargon II described in the inscription of the 8th Campaign.⁵³

When the distribution of weapons by room is examined, it may be concluded that the majority of around 40 quivers were found in the Entrance Room and in Room 1 (Table 6, Figs. 22, 37). Of these quivers, three carried an inscription. Apart from the quivers with various geometric and band decorations, one which bears a military parade, visible on a small broken fragment, is striking. A find in the upper level of the Entrance Room, an iron quiver containing four solid tanged, leaf-shaped arrowheads and two short barbed bronze arrowheads,⁵⁴ is also intriguing (Fig. 23). Some sections of this unique specimen were covered by decorated bronze plates.

Hundreds of spearheads (Fig. 24) and arrowheads were recovered at different levels in almost every room (Table 6, Figs. 38–39). All spearheads, save one, are iron. Inscribed on a bronze spearhead obtained in Room 3 is a written dedication to the god Haldi by Rusa, son of Argišti.⁵⁵ The majority of the arrowheads are iron (Fig. 25). The fewer bronze arrowheads are solid tanged, leaf-shaped and short barbed (Fig. 26). There are two examples of the same form but with two rectangular holes, perhaps elongate slots, on the body (Fig. 27). Most of these arrowheads were obtained from Room 1.

Apart from the various types and quantities of weapons mentioned above, it is necessary to discuss some other striking finds from inside the rooms (Table 5). A great number of large and small nails (Fig. 28) were obtained in almost all rooms. A mushroom-headed nail with iron shanks, bronze head, and a ring that has a cuneiform dedicatory inscription was uncovered in the Entrance Room (AY. 11). As in the temple courtyard,⁵⁶ it might be stated that, in particular, the iron and bronze eagle- and mushroom-headed nails were used to hang weapons up on the walls of the rooms. Bronze plates must have been nailed on the wooden items fixed to the walls of the rooms. Plates with a sun motif (Fig. 29), made in repoussé technique, in Rooms 1 and 2 are among the most significant finds in this group. Outstanding finds also include a fragment of votive plate with a depiction of Teišeba on a bull found in Room 3 (Fig. 30, right below, Fig. 31, top), bronze fragments that might have belonged to several figurines, and decoration plates or strips in Rooms 1 and 2 (Fig. 30). Three bronze armlets from Room 1, and a bronze fibula found in the Entrance Room are other finds which should be mentioned.

A very few pieces of pottery have been obtained from these rooms. Apart from a few small and larger bowl fragments, a complete candelabrum has been excavated. It is useful to highlight some important points concerning various finds from the Entrance Room. Two jars juxtaposed on the floor at the northeastern corner of the first level of the room are important to note.⁵⁷ The mouths of both jars, located immediately next to the staircase, were covered (Fig. 32). A bronze shield, with its inner part facing upward, was located over the mouth of the jar to the east (Fig. 33), whereas a bronze plate resembling a tray was located on the other jar (Fig. 34). It might be

⁵³ Foster 2005, p. 810.

⁵⁴ Çilingiroğlu 2006, pp. 237–240.

⁵⁵ Salvini 2001b, p. 275, AyBr 13.

⁵⁶ Sağlamtımur *et al.* 2001, pp. 219–223.

⁵⁷ Çilingiroğlu 2004b, p. 258.

suggested that the bronze shield and the bronze tray were used as lids. It is noteworthy that some small shields were unearthed near the gate of the temple in Altıntepe.⁵⁸ It has been proposed that they were made smaller in size by folding their outer edges in, with an added single handle in the middle, and that with their new shape, they served as lids for vessels or cauldrons.⁵⁹ Even though some rivets were apparent on the inner side of the shield found on the jar in Ayanis, no handles have been unearthed. Another important point about the jars is that they were filled with unburned millet seeds. These two jars are not the only finds that were filled with millet. The double-handled bronze cauldron with a volume of about 110 L found at the northeastern corner of the lower level of the room and a jar in its north were both filled with millet (Figs 10, 35).⁶⁰ Hundreds of *in situ* iron arrowheads in a pile to the south of these jars give the impression that they were taken out of quivers and collected in an organic receptacle, such as a mat or a sack. Unlike some quivers in the temple courtyard, none of the quivers in the rooms are filled with millet. When this evidence is taken into consideration, proposals about the movement of millet in the temple area might be developed.

Karmir-blur (Teişebai URU)

Although many weapons with inscriptions dedicated by Urartian kings to the god Խaldi have been found in the Karmir-blur Fortress, the distribution across the fortress assemblage varies (see Tables 1–3a and Fig. 1).⁶¹ Whereas the fortress is ascribed to Rusa, son of Argišti (Rusa II), it houses a significant array of items with inscriptions belonging to kings that reigned before him. Some were dedicated to Խaldi, while some only carried inscriptions denoting royal ownership.⁶² Inscribed metal objects, including votive objects, were found in many different connected and unconnected rooms in the fortress (see Tables 1–3a). These rooms are of different sizes and architectural characteristics. Upon deeper observation, it can be seen from Tables 1, 2 and 3a that in the northern section of the fortress, excavators found war equipment,⁶³ with inscriptions dedicated to Խaldi by Argišti, son of Minua (Argišti I), Sarduri, son of Argišti (Sarduri II) and Rusa, son of Sarduri (Rusa I). This area comprised small inter-connected rooms serving as sizeable cereal and/or wine storage facilities.⁶⁴ An inscription found in Room 11 in the northern section of the fortress is remarkable in this respect. The inscription on a door fitting states that it belongs to the treasure house of Rusa, son of Argišti, in the city of Teişebani.⁶⁵ What is surprising is that

⁵⁸ Özgüç 1966, Pl. XXXIV/7.

⁵⁹ Seidl 2004, p. 87.

⁶⁰ Çilingiroğlu 2012, p. 305.

⁶¹ Barnett and Watson 1952; Barnett 1959; Piotrovskii 1969, pp. 135–193; 1970. It should be emphasised once again that what is discussed here is assemblages. In fact, there is almost no space in the Ayanis Fortress where no weapons were unearthed, including “Domestic Dwellings”.

⁶² Minua: bronze bowls, horse harnesses; Argišti I: bronze shields, bronze helmets, bronze quiver, arrowhead, armour scales, bronze harnesses, bronze belts, bronze bowls, bronze artefact, silver lid; Sarduri II — bronze shields, bronze helmet, bronze quivers, arrow heads, bronze artifacts, horse bridle, horse frontal piece, horse bell, bronze bowls, cauldron handle bronze plates; Rusa I: bronze shield, bronze bowls.

⁶³ Literally, they are all weapons except an inscribed disk.

⁶⁴ Barnett and Watson 1952; Barnett 1959.

⁶⁵ CTU IV B 12–15.

although Karmir-blur contained a series of items with inscriptions identifying them as the property of Rusa II, none of the unearthed objects have been inscribed as votive offerings by Rusa II.

Artefacts found in the Karmir-blur Fortress belonged to at least two fortresses,⁶⁶ which explains the existence of so many metal artefacts. Nails called *sikkatu* are evidence that several items hung from the walls of the rooms.⁶⁷ It is apparent that most rooms were used for storage, with pithoi in them or without (Rooms 25 and 28) (see Fig. 1). It is surprising that personal belongings of kings and precious votive objects offered to Haldi were found in spaces also housing pithoi.

In the northern section of the fortress, many rooms, such as Rooms 3, 5, 8, 10, 11, 13, 18, 20, 23, 24, 25, 28, 38 and A, held a great number of metal artefacts. As is noted in Table 3a, Rooms 3, 5, 8, 10, 13, 23, 28, 33, 34, 36, 38 and A contained inscribed votive objects. In the process of storing objects, no apparent differentiation can be observed between the inscribed and uninscribed or votive and personal belongings. In other words, the personal items of the king shared the same room as the votive objects that were also found in many of the other rooms. The number of bronze and iron items found in pithoi in rooms 25 and 28 is surprisingly high.⁶⁸ Although Table 3a illustrates the locations of the inscribed votive items room by room, it would also be useful to examine other artefacts found together with them in order to understand the general and specific functions of the individual rooms. Iron knives and a sword in Room 8, iron swords, knives, sickles and daggers in Room 13, bronze cups, a horse bridle, and a buckle in Room 18 have been reported.⁶⁹ In terms of findings, Room 28 is remarkable: a bronze votive shield 1 m in diameter that was dedicated by Argišti son of Minua (KB. 1 in Table 1) was found being used as a pithos lid. Another bronze shield, dedicated by Rusa (734–714 BC), son of Sarduri (KB. 27 in Table 1), was used as a lid for another pithos in the same room.⁷⁰ The pithoi in the room contained a great quantity and diversity of metal tools and arms. Richard Barnett summarises the finds from the storeroom with pithoi as follows:

Pithos 46 contained many iron objects... four spearheads, an iron hammer, great sickles, axeheads, curved knives with wooden or bone handles, bracelets, and a belt of bronze plate ornamented with five strips and a stylised tree... part of a quiver decorated with rows of lions, bulls... Pithos 48 contained half a great cauldron about 60 cm high... The other half was found in Pithos 54... In the bottom of [Pithos 58] was a bronze helmet in fine condition... Pithos 55 contained six bronze conical shield bosses [five of which were inscribed]... Pithos 15 contained a quantity of seeds of horse-beans, five Urartian seals... carved bone, wooden and bone handles, a wooden button, a bronze fibula, a small iron knife and a quantity of sardonyx and paste beads. Pithos 60 contained pieces of stag horn, sawn ready for making objects.⁷¹

⁶⁶ Piotrovskii 1959, pp. 177–181.

⁶⁷ Barnett 1959, p. 12.

⁶⁸ Around 100 bronze and silver bowls found in Room 25 bear the names of kings (Barnett and Watson 1952, p. 143; Piotrovskii 1960, p. 106; Piotrovskii 1969, p. 153), such as Minua, Argišti I, Sarduri II and Rusa II. Among these, 87 bronze bowls were found in a pithos for wine. Decorated bronze belts and a copper cauldron were also unearthed here, along with bronze helmets and shields. The items from Room 25 consist of great number of metal artefacts, such as iron sickles, adzes, curved knives, a dagger, various projectile points, a saw, horse harnesses, iron bridles, and a bronze bell. Room 28: It is evident that there is a small altar in this storage room and the walls of the room are painted with pictures depicting holy scenes. It has been claimed that this place was used as a temporary sacred area (Oganessian 1955, p. 60; Piotrovskii 1969, p. 175).

⁶⁹ Barnett and Watson 1952, pp. 139–143.

⁷⁰ Barnett 1959, p. 7.

⁷¹ Piotrovskii 1960, pp. 106–107; Barnett 1959, pp. 5–8.

Obviously, tools for daily use were found many times together with inscribed weapons and other artefacts. Among the findings, there were not only plentiful personal belongings, but also votive items and tools. In other words, it has proved impossible to find a room specifically used for storing dedicatory objects. What, then, should we conclude from the situation at Karmir-blur? It can be deduced that the rooms with pithoi served as storage places without any divisions between tools, cereals or votive items. The transfer of objects from Erebuni to Karmir-blur might have been the cause of the latter exceeding in its capacity, which resulted in numerous artefacts being stored in, or beside, the pithoi in the magazines. In fact, towards the end of the seventh century BC, it is apparent that metal itself increased greatly in value, so much so that all types of metal artefacts which were no longer serviceable were kept for their worth as metal.⁷²

Towards the end of the Karmir-blur excavation, war equipment with inscriptions was recovered from the rooms numbering in the 40s and 50s, which are located mostly in the southern segment of the fortress. It is particularly interesting that equipment for the personal horses of the Urartian kings was found in Room 48. It is also of note that a horse blinker was found in a small room associated with a chanfron, horse armour, a harness, saddle pieces, and small horse bells, which according to inscriptions belonged to kings Argišti I and Sarduri II.⁷³ Two shields were discovered in Room 53, one dedicated to Haldi by Sarduri, son of Sarduri (Sarduri III) and the other decorated with lion and bull patterns.⁷⁴ However, the locations of these rooms, thought to be situated in the southern sections of the fortress, are not sufficiently clear.

Although inscriptions found in the Karmir-blur Fortress prove the existence of a temple devoted to Haldi there, archaeological excavations to date have failed to identify its exact location. Since the blocks with inscriptions referring to Haldi's *susi* came from an area in the southeast of the fortress, it has been argued that a terrace in this area is suitable for the temple (see Fig. 1)⁷⁵ and therefore the temple could have been located there.⁷⁶ In addition, this terrace is large enough to have accommodated some of the rooms within the temple. This section of the fortress is quite far away from the storage rooms in the north, mentioned above and seen on the plan (Fig. 1). As the plans of Karmir-blur show, the number of rooms increased to the south; therefore, rooms with numbers in the 40s to 50s should be located in this southern section. Horse equipment found in Room 48 and the votive shields from Room 53 are important in this respect. It should be noted that Room 53 may have been in the suggested temple area, since it houses votive objects. Nonetheless, the architectural details of this area and the lack of information regarding the contexts of finds make it difficult to comment. The ground levels and find contexts of the rooms in the proposed temple areas are extremely dubious. For this reason, while the residential areas to the south of the fortress were excavated in the final years of the project,⁷⁷ with some publications considering them, the possible temple location and details regarding the structures around it are unknown.

⁷² The view that scrap metal was kept is supported by the discovery of two fragments of a cauldron found in different pithoi (Barnett 1959, p. 8).

⁷³ Piotrovskii 1959, p. 175; 1960, p. 108.

⁷⁴ Piotrovskii 1960, p. 109; Hellwag 2012, pp. 235–236; Seidl 2004, p. 43 (L.1); CTU B 16–1.

⁷⁵ Piotrovskii 1969, p. 159; Piotrovskii 1970, figs 18–19.

⁷⁶ For reconstruction see Dan 2010, pp. 44–52.

⁷⁷ Martirosyan 1963, pp. 221, 233.

Two shields from Room 3 and 28 at Karmir-blur have some notable details in terms of their inscriptions (see KB. 1 and 2 in Table 1). They both belonged to Argišti's I's treasury and were found together with votive items dedicated to Ḫaldi. This reflects an unusual situation: might an object be both votive and the personal property of the king? The shield found in Room 28 bears an inscription reporting that it was dedicated in the city of Er(e)buni, yet neither this information nor the context of the shields is useful in helping to explain the situation. Both shields are plain; in any case, the existence of decoration does not alone create a criterion for drawing conclusions. Was this situation peculiar to Argišti I, as both shields belonged to him? There is no clear evidence indicating whether the lines were synchronously written or not. In fact, there are several objects whose inscriptions are known to have been written in different periods.⁷⁸ A conical helmet with the arching relief snake design from the temple area in Ayanis, for example, has a two-line inscription (see AY. 6 in Table 1). Whereas one line reports that the helmet was dedicated by Rusa son of Argišti, which is expected, the second line unusually mentions that the object was the treasure of Išpuini, although the inscription has some missing parts.⁷⁹ As Salvini has stated, this is a surprising, anachronistic circumstance.⁸⁰ Apparently, while the helmet had belonged to the treasure of Išpuini at the outset, it was consecrated and dedicated to Ḫaldi in Eiduru.kai more than one century later, in the reign of Rusa II. An inscription on a button of armour excavated in Karmir-blur Room 36 is also noteworthy (KB. 14 in Table 1). The inscription on the face of the button mentions that it was dedicated by Argišti (*ar-giš-ti-še NÍG.BA*), yet the one on the other side states "of Argišti" (*ša ar-gi-iš-ti*).⁸¹ When one considers the scribal details of the name of "Argišti", a differentiation is apparent. Seidl put forward that such variations may originate from a style of writing in two different hands, which may also suggest different periods.⁸² To conclude, it is possible that the shields of Argišti had formerly been registered to the royal treasury elsewhere, but thereafter they were taken and offered to Ḫaldi by consecrating them. Evidence indicating a similar situation comes from the Upper Anzaf Fortress (YAK. 2A–E in Table 1). Five large rings have inscriptions in Assyrian which mention that they were taken away from the storehouse of the city Uṭiruhī and were dedicated to Ḫaldi.⁸³ Therefore, the objects were not of any meaning ecclesiastically and were kept in storerooms somewhere else prior to being offered to the god Ḫaldi. After such a transition, they would be no ordinary objects and would never again be anything other than sacred items belonging to Ḫaldi.

To conclude, the strongest possibility is that a lack of space in the fortress resulted in finding new solutions by creating additional areas in storerooms with pithoi. Taking into account that a great quantity of metal artefacts from Erebuni were brought to Karmir-blur, the necessity of additional space was inevitable. Every single empty space in the magazines must have been utilised. Storerooms, especially in the seventh-century BC fortresses, encompassed enormous spaces.⁸⁴ This is another reason why they were planned as extensive structures, simply to accommodate

⁷⁸ I would like to thank U. Seidl who drew attention to this point.

⁷⁹ CTU IV B 12–19; Seidl 2004, I.12.

⁸⁰ CTU IV B 12–9, see also p. 62.

⁸¹ CTU IV B 8–17; Seidl 2004, E.27.

⁸² Ursula Seidl, personal communication 2013.

⁸³ Belli *et al.* 2009, p. 104; CTU IV B 2–7.

⁸⁴ See Grekhan 2009.

more bountiful harvests. Furthermore, some security problems must have been an active factor for moving precious items to storage areas that were more difficult to reach.

Çavuştepe (Sardurihinili)

The situation in the Çavuştepe Fortress is a little different and is open to speculation. It is generally accepted that Çavuştepe contains two square temples, one dedicated to Haldi in the upper citadel, although there is no inscription, and the other dedicated to Irmušini.⁸⁵ No evidence has been found that proves there were depots belonging to the temples in question; therefore, it is hard to comment on the rooms where the votive objects were stored. However, it has recently been argued that there is a third temple in the citadel and that this temple forms the structure called “Uç Kale”.⁸⁶ Taner Tarhan defines the “Uç Kale” (“edge citadel”) structure as a rectangular and double *cellae* temple type (ancestor cult or king cult). Tarhan says that the structure was multi-storey, due to its thick and strong walls, and that the lower storeys, which are surrounded by the stone foundations of two *cellae*, were “basement chambers” (Fig. 4).⁸⁷ Afif Erzen emphasises that Uç Kale was originally a double-storey building with a basement used for storage purposes (a magazine).⁸⁸ It is obvious that Room I in the west, and Room II just behind it, were accessed from above. Whereas Erzen claims that they were accessible by mud-brick stairs,⁸⁹ Tarhan argues that they could be reached by wooden ladders,⁹⁰ lowered from the upper floor. Whatever the method was for access, it is almost certain that these rooms formed the basement (Fig. 5). Room II lies to the east of Room I and is bigger than Room I. Two sandstone column bases and numerous frescos, painted wood, and plaster pieces were found in Room II.⁹¹ It is particularly remarkable that three bronze helmets, two of which were nested,⁹² and bronze quiver pieces with depictions of a military parade were found.⁹³ Erzen notes that some relief bronze plates have been uncovered at the same location. He describes the area as follows:

Ausserdem sind in der Uçkale, die jetzt zwei durch eine Lehmziegelmauer getrennte grosse Wohnräume zeigt, sehr schöne Freskofragmente, bronzene Reliefplatten, Helme und Inschriftsteine gefunden worden. Aus Inschriften, die der urartäische König Sadur II. (Mitte 8. Jh. v. Chr.) verfasste, geht hervor, dass das Erdgeschoss ein Magazin war. Es konnte nachgewiesen werden, dass es in der Südwestecke der Uçkale, die den Anschluss an die Hauptmauer der Burg bildet, eine grosse Steintreppe gab und der Bau wegen der Mauerdicke von vier Metern mehrstöckig gewesen sein muss. Ausserdem wurden in den letzten Jahren durch Ausgrabungen im Osten und Norden der Uçkale ausserhalb der eigentlichen Stadtmauer befindliche späte Siedlungsreste der Zeit nach der Einnahme festgestellt.⁹⁴

⁸⁵ Erzen 1988, pp. 6–9.

⁸⁶ Tarhan 2005, pp. 115–136; 2007, pp. 265–282.

⁸⁷ Tarhan 2005, p. 119; 2007, p. 268.

⁸⁸ Erzen 1978, p. 58.

⁸⁹ Erzen 1967, p. 469.

⁹⁰ Tarhan 2005, p. 119; 2007, p. 270.

⁹¹ Erzen 1966, p. 503; 1967, p. 469; 1978, p. 58.

⁹² Erzen 1966, p. 503.

⁹³ Erzen 1962, p. 624.

⁹⁴ Erzen 1978, p. 58.

Based on these finds, Erzen concluded that this basement floor was a royal storeroom.⁹⁵ Tarhan, on the other hand, claimed that this place was a temple rather than a storage area,⁹⁶ drawing on such evidence as the perfectly finished corner risalit walls, the blind windows, and the Adilcevaz relief depicting an Urartian fortress or temple with blind windows.⁹⁷ Both may be valid conclusions. The upper floor of this two-storied building might have served as a temple, and the basement floor as a storage area where weapons presented at the temple were kept. Obviously, the information presented above is not sufficient to formulate a coherent conclusion, something that requires detailed stratigraphic, contextual, and architectural data.

Upper Anzaf

Further information which casts light on this issue comes from the Upper Anzaf Fortress, where there is a Դaldi temple built by Minua.⁹⁸ Many dedicatory inscriptions belonging to Urartian kings such as Išpuini,⁹⁹ Minua, son of Išpuini, Inišpua, son of Minua, Sarduri, son of Argišti (Sarduri II), and Argišti, son of Rusa (Argišti II) were found in the fortress, and there are a number of inscribed metal artefacts belonging to these kings.¹⁰⁰

As seen in **Tables 1–3b**, inscribed metal artefacts have been excavated from various sections of the fortress, such as Hall 11, Room 9, the Grand Reception Hall, the Temple Courtyard, and the Room in Temple West Courtyard. As in Karmir-blur, there is no single location containing a concentration of votive findings with inscriptions; however, if the numbers of votive items with inscriptions and the finds sharing the same rooms are taken into consideration, the existence of two main structures can be seen. The “Room in Temple West Courtyard” was apparently designated as storage for votive items within the temple area (**Fig. 2**); Room 9, on the other hand, was located among some rooms with different functions in the northern section of the fortress (**Fig. 3**).

As mentioned above, it is natural that the most suitable area to keep votive objects was a space within the temple area to which they could be easily moved after a ceremony and then secured. In the Upper Anzaf Fortress, there is a courtyard with rooms opening onto it evident in the western section of the square core temple (**Fig. 2**). The first room, nearest to the temple to the west (Temple West Courtyard), draws our attention with its many metal objects (**Table 4**). Two inscribed votive objects that were offered to Դaldi have been uncovered. One is a bronze shield piece that belonged to Išpuini and Minua (**YAK. 3** in **Table 1**), whereas the other is a series of votive rings (**YAK. 4A–D** and **5** in **Table 1**). This room is 8 m²,¹⁰¹ and according to Oktay Belli, its excavator, it was designated a room for weapons and items dedicated to the god Դaldi. It lies at a point where a corridor ends in the direction of the temple.¹⁰² The eastern and western walls of the

⁹⁵ Erzen 1988, p. 10.

⁹⁶ Tarhan 2005.

⁹⁷ Çilingiroğlu 1997, p. 138, fig. 1.

⁹⁸ See the inscription CTU I A 5–42A–C, A 5–43.

⁹⁹ Belli *et al.* 2009, p. 104.

¹⁰⁰ Belli 2003, p. 18 (Argišti (Sarduri II)); Belli 2003, p. 19 Argišti, son of Rusa (Argišti II); Belli 2009, p. 451.

¹⁰¹ No further detail regarding dimensions of the room has been presented.

¹⁰² Belli 1998, pp. 28–29.

room, which can be accessed either from the temple courtyard or from the corridor, are made of mud bricks with stone foundations that lie perpendicular to the eastern and western walls of the rock corridor. The room has two doors on these walls, one of which opens onto the temple to the east, and the other onto the corridor to the west. Bronze plates on the remnants of the wooden door, which are thought to be single leaf, are fastened with bronze mushroom-headed nails. It can be gathered from the site reports that the room was exposed to a conflagration, and all finds mentioned above were recovered within this fire deposit. The bronze objects and weapons were affected by the intense fire, and have thus changed form.¹⁰³

A knife, various leaf-shaped arrowheads, and a 31.5 cm iron spearhead were found here. Of the two bronze arrowheads, one is solid and barbed, and the other is solid, tanged and leaf-shaped with barbs.¹⁰⁴ As can be seen in **Table 4**, various types and quantities of items such as a fibula, large votive rings,¹⁰⁵ disks, pieces of horse harnesses, bracelets, and bronze plates, along with military equipment such as bronze helmets, cheek plates, shields, shield handles, arrowheads, differently sized spearheads, and armour pieces were found.¹⁰⁶ Nine votive rings were assumed to have been hung as chains on the door of this room leading to the temple area (see **YAK. 4A–D** and **5** in **Table 1**).¹⁰⁷ The northern part of the room was rich in metal finds, of which the most important is a 0.78 m outer edge segment of a bronze shield,¹⁰⁸ thought to have been 1.0 m in diameter. This unique shield bears an inscription (**YAK. 3** in **Table 1**) and a depiction of Urartian gods in arms astride their animals, led by a figure on the move from left to right. It is not certain whether this figure is a deity, such as Haldi, or a king, as Oscar White Muscarella suggests.¹⁰⁹ Nearby, an army which has been defeated by lions and a giant lance thrown from the direction of the Urartian gods is depicted. It is certain that this room in the temple courtyard of the Upper Anzaf Fortress is a storeroom of the temple. There is no reason not to believe that this room, which can be accessed from the corridor and the temple area, was built at the same time as the temple, during the reign of Minua. As in Karmir-blur, it seems unlikely that all the finds in this room were votive. Again, we cannot confidently reach a conclusion that items such as some fibula, horse harnesses, and bronze fragments without inscriptions were votive. Although they came from the same contexts as votive items, those contexts are unreliable. In addition, many finds were affected by a severe fire and changed form.

Another room, Room 9, where metal items are concentrated, lies to the north of the fortress (**Fig. 3**). It is located in the far northwestern section, an area allocated to various storage and work rooms.¹¹⁰ It is understood that the corridor leading to the temple finished in a mud-brick wall at its southern end. In other words, there was quite a distance (about 50–60 m) between the terrace where the temple is built and these rooms, with a large mud-brick wall dividing the

¹⁰³ Belli 1998, pp. 28–29; 2003, pp. 9–10; 2007a, pp. 188–189.

¹⁰⁴ Belli 1997, pp. 389–390.

¹⁰⁵ Five of these had inscriptions saying that they were offered to the god Haldi by Išpuini, son of Sarduri and Inišpua, son of Išpuini.

¹⁰⁶ Belli 2003, pp. 9–10; 2007a, p. 189.

¹⁰⁷ Belli 2003, p. 20.

¹⁰⁸ Belli 1997, p. 389; 1998, p. 35.

¹⁰⁹ Muscarella forthcoming.

¹¹⁰ Belli 2007b, p. 416.

two areas. These factors make the physical connection between the northern fortress storerooms and workshops and the temple obscure. It has been reported that votive weapons were stored in one of the structures in the northern section of the fortress (see **Tables 1–4**).¹¹¹

Other rooms, including storerooms with pithoi and rooms of differing functions such as kitchens and workshops, make up a whole amongst themselves, as they were accessible to each other by means of doors. The architectural arrangement of these rooms is as follows (**Fig. 3**). The main corridor measures 2.5 m wide and 46 m long, lying along a north-south alignment, and provided access to various storage areas in the northern section of the fortress. The mud-brick corridor with stone foundations opened onto a large hall in the northwestern tip of the complex, followed by a few steps down to Room 5. The hall containing six column bases (Hall 11)¹¹² was accessed through a door on the western wall of the corridor. Items similar to the inscribed door ring found in Room 11 of Karmir-blur were unearthed in the corridor. The inscription confirms that both sets items belonged to the treasury of Sarduri, son of Argišti.¹¹³ A similar inscription was found in Toprakkale.¹¹⁴ A rectangular bronze plate found in the hall mentions a shield dedicated to Ḫaldi by Minua (see **YAK. 8** in **Table 1**).¹¹⁵ Doors on the northern wall of this great hall, Hall 11, with dimensions of 10 × 30 m, lead to four storage rooms (Rooms 6–9). The director of excavations at Anzaf defined the easternmost storeroom (Room 9) as an “arsenal”, due to the various weapons found there (see **Table 4**).¹¹⁶ I, however, believe that a room containing inscribed offerings of arms, armour and artefacts to the god Ḫaldi could not be solely a mundane depot of weapons for military purposes. Room 9, which contained inscribed votive objects, lies west of Room 8, south of Room 4 and north of the great hall. A 1 m-wide door opens from the great hall in the south onto Room 9.¹¹⁷ Another door in the north of the room leads to Room 4. Room 9 is rectangular in shape, with a width of 2.5 m and length of 5 m, and there is an arched niche on the western wall of the room.¹¹⁸ This room could not be fully excavated like some others, and therefore no comment can be made about the findings from the floor. However, some analysis does help to identify the function of this room. Even though a bronze sword sheath (**YAK. 1**) and a bronze arrowhead (**YAK. 7**) were the only inscribed artefacts from the room, it contained many metal weapons and other objects (see **Table 4**). Among the items found in Room 9 were double-barbed iron arrowheads,¹¹⁹ twin-barbed, solid, tanged, leaf-shaped bronze arrowheads with inscriptions dedicated by Minua, and a bronze sword sheath dedicated by Išpuini. All are examples of weapons dedicated to Ḫaldi.¹²⁰ Parts of a bronze horse harness and numerous metal objects with no identifiable form, as a result of fire damage, are enough to conclude that bronze and iron objects were stored in this room.

¹¹¹ Belli 2003, p. 13; Belli *et al.* 2004, p. 3; Belli and Ceylan 2005, p. 179; Belli 2007a, p. 196.

¹¹² Belli and Ceylan 2005, p. 177.

¹¹³ Belli *et al.* 2005, pp. 218–219.

¹¹⁴ CTU IV B 12–18; UKN II 443.

¹¹⁵ Belli *et al.* 2004, pp. 4–5.

¹¹⁶ Belli 2003, 9–10; Belli *et al.* 2004, p. 3; Belli and Ceylan 2005, p. 179; Belli 2007a, p. 196.

¹¹⁷ Belli and Ceylan 2004, p. 32.

¹¹⁸ Belli 2003, p. 13; Belli and Ceylan 2004, p. 32.

¹¹⁹ Belli and Ceylan 2004, p. 32; Belli and Ceylan 2005, p. 179.

¹²⁰ Belli *et al.* 2004, pp. 5–6; Belli and Ceylan 2005, p. 180.

The situation in the Upper Anzaf Fortress is quite similar to that in Karmir-blur Fortress. Along with the inscribed votives, at least some uninscribed items can also be considered votive. The presence of votive objects in Room 9, with its position near rooms with pithoi and workshops, recalls the situation in Karmir-blur. As at Karmir-blur, the state of the Anzaf rooms implies that items were stored there because of a lack of space in the temple area. Alternatively, they were simply considered objects to be stored somewhere.

A common characteristic of the large rings from the room in the temple area (YAK. 4 A–D in Table 1) and those found in the Grand Reception Hall is concealed in their inscriptions (YAK. 2 A–E in Table 1). According to these inscriptions, they both sets were brought from a different city and dedicated to Haldi probably in Anzaf. The rings found in the room in the temple area provide some significant information on historical geography and the reach of the area north of the Urartian border in the very early period of the Urartian history. According to the inscription, Išpuini, Minua, and Inišpua had taken the rings from the enemy lands *Amuša*.¹²¹ Diakonoff and Kashkai link *Amuša* with *Irdua* and *Šuluqū*, located southeast of Lake Sevan.¹²² Thus it may well be concluded that interest in the area north of the Lake Van Basin dates back to the late ninth century BC.¹²³ It seems, however, that *Amuša* was out of Urartu's power soon afterwards, since the annals of Argišti II (714–685 BC) mentioned both its conquest and its loss again.¹²⁴ Like the rings from the temple area, the inscriptions of those excavated from the Grand Reception Hall attest to the fact that they were brought from *Uṭiruhi*. While Diakonoff and Kashkai consider this area to have been around Kars-Kağızman, Salvini¹²⁵ locates there to an area southeast of the Araxes-Arpaçay junction and the inscriptions on the rings are the earliest reference to this region.¹²⁶ It is known that Urartian kings such as Išpuini and Minua, Argišti I and Sarduri II campaigned against *Uṭiruhi*. The inscriptions on the votive rings point towards Urartian forces organising sudden attacks on the city from time to time. The inscriptions are evidence that the treasure rooms of *Uṭiruhi* were despoiled and the rings taken during one of the campaigns against the region.¹²⁷

Name of the Buildings

Finally, we should mention a group of buildings whose meaning in the inscriptions could not be resolved. Temple inscriptions in the Karmir-blur¹²⁸, Keŕ¹²⁹ and Ayanis fortresses, built by Rusa II, mention a building named *É adunusini*. Ayanis temple inscriptions (Fig. 36) give the following information about the building:

¹²¹ Dinçol and Dinçol 1995, pp. 30–31; CTU IV B 4–1 A,B,C,D.

¹²² Diakonoff-Kashkai 1981, pp. 8, 77, 29, 44.

¹²³ Belli 2003, p. 21.

¹²⁴ A later reference to *Amuša* (CTU A 11–3) is on a stele of Argišti II in Erevan. For the co-regency of Minua-İnišpua and the status of Inišpua within the kingdom, see Sevin 1979, pp. 1–5.

¹²⁵ Salvini 2002, p. 37.

¹²⁶ Diakonoff and Kashkai 1981, pp. 102–103.

¹²⁷ Belli *et al.* 2009, p. 103.

¹²⁸ CTU I A 12–2 III–5.

¹²⁹ CTU I A 12–4 I–2 and 5.

*“te-er-du-li-ni a-li i-ni ú-li BE-LI te-er-du-li-ni ^Ea-du-nu-si-ni ^mru-sa-a-še a-li”*¹³⁰

*“What pure is there... they set it down (in?) the adunusini building Rusa says: what in the house of Rusa has entered(?)...the sword...”*¹³¹

The *adunusini* has been interpreted¹³² as a group of buildings connected with the temple area, where sanctified objects, perhaps associated with weapons (*TIL-LI* or traditional reading *BE-LI*), were placed.¹³³

The inscription orders that anything pure should be put in that building.¹³⁴ Mention of the building in the temple inscription, and reference to it as “Rusa’s house”, which is perhaps the fortress itself, in the second sentence is important and may imply that this building is linked to the king as much as it is linked to the temple. Yet, there is no mention of such a building before Rusa II. It is apparent that the building mentioned in the inscription is within the Ayanis Fortress. Items appear to have been first purified/consecrated before being placed there, although the procedure for purification is not known.¹³⁵ If we accept that *adunusini* is a complex including rooms where precious weapons were put, then the best candidate for the *adunusini* at Ayanis is the set of rooms underneath the temple where the votive objects were found

Mythological Background of Votive Weapons Transference

Once dedicated to Țaldi, these items would become the sacred property of the god and it must be assumed that they were considered his personal belongings. Many shields found in Ayanis are too thin for warfare, while some of them are distinctively decorated and inscribed. It may be concluded that at least some items were not used in real fighting, but were instead employed during ceremonies,¹³⁶ which may have replicated real war, or during coronations. In this respect, I would like to touch briefly on the transference of divine weapons and ritual. As mentioned above, it is apparent there is a relationship between weapons and Țaldi, as seen in the textual and archaeological evidence. Now we should add “the king” to this duality, because it was kings who made the dedications to the god. The mythological battle scene on the Anzaf Shield should be remembered in this respect. On the shield, a divine power, or the canonised king, gained a victory through the use of a divine weapon (*šuri*), which was depicted.¹³⁷ It is unlikely to be coincidental that this shield dates to the co-regency of Išpuini and Minua, a situation of successor and predecessor. The connection is clear: the god Țaldi and the divine weapon that provided victory were the two most important images in the scene. The god would give the divine

¹³⁰ Salvini 2001a, p. 257, Ay-susi Section IV. Line 2; CTU I A 12–1 IV–2 and 5.

¹³¹ Salvini 2001a, p. 261.

¹³² Salvini 2001a, p. 260.

¹³³ See for the discussions Seidl 2004, pp. 45–46; Belli and Salvini 2010, pp. 43–45 n. 8 and n. 10; CTU IV B 13–14.

¹³⁴ By “pure” might be meant “sanctified” and/or “consecrated”.

¹³⁵ For a proposal on the purifying process see Baştürk 2009, pp. 138–142.

¹³⁶ It is quite clear that the lion-headed shield from Ayanis could not have been used during a real war due to the fact that it was produced from very thin plate and carried a 5.1-kg lion head of bronze. Seidl (2004, p. 87) suggests that the shield may have been used before it was consecrated and the lion head attached.

¹³⁷ For further remarks see Zimansky 2012, pp. 719ff.

and victorious weapons to the successor, namely Minua, during his coronation. This divine action provided legitimacy and empowered the king during his reign. The series of other gods depicted in the shield would approve and canonise him.

For a better understanding of the mythological thought, it is necessary to examine the textual documents of the Bronze Age of Mesopotamia.¹³⁸ Some tablets from Mari, located on the bank of the Euphrates, may cast light on the link between the god, the king, and weapons. An oracle to Zimri-Lim, who regained his father's throne after the interregna of usurpers, was presented on a clay tablet to the storm god Adad and dated to *ca.* 1780 BC. Adad was the patron deity of Zimri-Lim, and he made this manifest with the following words:

"Thus speaks Adad:...

*I have brought you back to the throne of your father, and have given you the arms with which I fought against Tiamat. I have anointed you with the oil of my victory and no one has withstood you."*¹³⁹

The inscription states that divine weapons would be given to the enthroned king, namely, Zimri-Lim. In other words, he was blessed, given royal legitimacy, and empowered by Adad. These actions are also realised through the transference of the ritual weapons of Adad, which ensured victory. There must be a connection between weapons and the abstract concept of triumph underlying this idea. When Nicholas Wyatt examined the text, he interpreted the situation as follows: "It seems that ritual weapons were handed to the king at his enthronement. He would use these (so ran the theory) in his own wars, thus replicating the *primaeval* battle. Thus was war virtually apotheosized, and conceptualized as a reenactment of divine battles."¹⁴⁰

What we know from the inscriptions on the votives in Urartu is that the Urartian kings dedicated weapons to the god 𐎶𐎵𐎶𐎵, rather than the god blessing weapons for the kings. But this does not contradict the ritual and ideology explained above. Rather, it is a mirror-image: the deity supplies weapons at the right moment symbolically, at a coronation, in reality, in time of war, and the king devotes his battles, and the weapons as symbols of them, to the deity.¹⁴¹

The idea behind the Mari text is the resurrection of the cosmic triumph of the god in the primordial myth which guarantees royal victories.¹⁴² The process of handing over the weapons to the new king must have been undertaken with the same divine weapons, but in the temple and in the course of a ritual. Therefore, it is not unrealistic to propose that a similar ritual took place and is attested to by the existence of thousands of arms in the Urartian temples. Furthermore, it should be noted that a brass lance dedicated to 𐎶𐎵𐎶𐎵 has been unearthed in the Ayanis temple. Like other inscribed weapons there, this particular lance, or weapon more generally (*i-ni GIŠ_{sur}i*=this *šuri*),¹⁴³ was part of the ritual dedicated to 𐎶𐎵𐎶𐎵. So, ideological legitimacy must have been constituted by rituals on the basis of a divine conflict concept.

It seems that this tradition reflects quite old and deep-rooted elements of ancient Mesopotamian culture, reflected in the royal inscriptions of Neo-Assyrian kings as well. It is possible to establish

¹³⁸ I am grateful to A. Sagona who felicitously brought this issue to my notice.

¹³⁹ Wyatt 2001, p. 100.

¹⁴⁰ See footnote 143.

¹⁴¹ I would like to thank N. Wyatt for generously sharing his thoughts on this matter with me.

¹⁴² Wyatt 1998, pp. 841–843; 2001, p. 100.

¹⁴³ Çilingiroğlu and Salvini 1999, p. 58.

an analogy with Neo-Assyrian examples indicating that weapon transference from gods to kings took place on different occasions:

Assurnasirpal II

“When Aššur, the lord who called my name (and) who makes my sovereignty supreme, placed his merciless weapon in my lordly arms...”¹⁴⁴

“When Aššur, my great lord, who called me by name (and) made my sovereignty supreme over the kings of the four quarters, had made (my) great name supreme he placed his merciless weapon in my lordly arms (and) sternly commanded me to rule, subdue, and direct the lands (and) mighty highlands....”¹⁴⁵

Shalmaneser III

“When Assur, the great lord, chose me in his steadfast heart (and) with his holy eyes and named me for the shepherd ship of Assyria, he put in my grasp a strong weapon which fells the insubordinate, he crowned me with a lofty crown, (and) he sternly commanded me to exercise dominion over and to subdue all the lands in submissive to Assur...”¹⁴⁶

“With the exalted might of the divine standard which goes before me (and) with the fierce weapons which Assur my lord gave to me, I fought (and) defeated them...”¹⁴⁷

“I pointed the weapons of Assur, my lord, against them (and) defeated them...”¹⁴⁸

“With the supreme forces which Aššur, my lord, had given to me (and) with the mighty weapons which the divine standard, which goes before me, had granted me I fought with them....”¹⁴⁹

Tiglath-pileser III

“Inside it, I founded a palace for my royal residence. I named it Kār-Aššur, set up the weapon of the god Aššur, my lord, therein...”¹⁵⁰

“I restored... Assyria to ... I built a city inside it I founded a palace for my royal residence.... I named it ..., set up the weapon of the god Aššur, my lord, therein and settled the people of foreign lands conquered by me therein...”¹⁵¹

“I appointed Idibi’ilu as the ‘gatekeeper’ facing Egypt....the weapon of the god Aššur I placed therein....”¹⁵²

“At that time, I made a pointed iron ‘arrow’, inscribed the mighty deeds of the god Aššur, my lord, on it and I set it up the spring of the city Bīt-Ištar...”¹⁵³

Sennacherib

“I took in my hand the mighty bow that the god Aššur had granted to me (and) I grasped in my hand an arrow that cuts off life. ...”¹⁵⁴

¹⁴⁴ RIMA 2 A.O.101.1: i 17b–18a.

¹⁴⁵ RIMA 2 A.O.101.1: i 40b–43a.

¹⁴⁶ RIMA 3 A.O.102.1: ii 11–13.

¹⁴⁷ RIMA 3 A.O.102.2: i 41b–51a.

¹⁴⁸ RIMA 3 A.O.102.2: ii 66b–75a.

¹⁴⁹ RIMA 3 A.O.102.2: ii 86b–89a.

¹⁵⁰ RINAP 1 Tiglath-pileser III 5: 1–4a.

¹⁵¹ RINAP 1 Tiglath-pileser III 6: 1–4a.

¹⁵² RINAP 1 Tiglath-pileser III 42: 34–35.

¹⁵³ RINAP 1 Tiglath-pileser III 16: 8b–10a.

¹⁵⁴ RINAP 3 Sennacherib 18: v 11 ‘b.

“The god Aššur, the great mountain, granted to me unrivalled sovereignty and made my weapons greater than (those of) all who sit on (royal) daises.”¹⁵⁵

Esarhaddon

“Chosen by the gods Aššur, Šamaš, Nabû and Marduk; called by the Sîn, favourite of the god Anu, beloved of queen-the goddess Ištar, goddess of everything- (and) the merciless weapon that makes the enemy land tremble, am I...”¹⁵⁶

“The goddess Ištar, the lady who loves my priestly service, put in my hands a strong bow (and) a mighty arrow, the slayer of the disobedient; she allowed me to achieve my wish and made all of the unsubmitive kings bow down at my feet...”¹⁵⁷

As Wyatt has remarked and demonstrated using many ancient religious examples, after the king handed over the sacred weapons, he would duplicate the god's victory. Enabled by the god at this time, the king's absolute success was guaranteed. For Urartu, it is possible this was a recurring ritual, occurring on certain occasions such as before or after military campaigns or in other circumstances where military success was desired. This account is reflected in the rock inscriptions reporting military campaigns of the Urartian kings which begin with phrases like, “The god Haldi set out with his *šuri*” and “The god Haldi is mighty/victorious, Haldi's *šuri* is mighty/victorious”, or “Haldi went out (to war) with his *šuri* he conqueredland (or city),” which announced Haldi's victory against enemy lands. These sentences were generally followed by statements of the same victory by the king, suggesting a reflection of the god's victory on the king. Thus it can be deduced that the display inscriptions reporting military activities had a mythical background and corresponded with the conflict ideology. Again, the co-regency of Išpuini and Minua was the period in which these literary repetitions appeared for the first time. This also overlaps with the theory that has been put forth on the basis of the Meher Kapı inscription that Išpuini and Minua were the founders of the state religion of Urartu. Although the writer has no more to say on mythological matters, this subject deserves a more comprehensive study.

Discussion and Conclusion

The results gained from this paper can be summarised as followed:

- 1- It would be prudent to ascribe or not a votive function to shields without inscriptions, since we do not know how to treat them. Or is it realistic to consider them all votive? It should be noted that no votive inscribed fibula, horse harnesses, knives, cauldrons and so on have been attested in any Urartian fortress.
- 2- As can be understood from the Ayanis Fortress example, storage areas were constructed beneath the temple courtyard if there was sufficient space. Upper Anzaf is another example of such storage areas built within the temple area. The archaeological data, especially at the Upper Anzaf and Ayanis fortresses, unequivocally revealed these areas' physical and organic bond with the temple; they were not independent from it, but part of it.

¹⁵⁵ RINAP 3 Sennacherib 1: 4;2:4;3:4;4:4; 15: i 14; 16: i 15; 17: i 11;22: i 10; 23: i 9b and 37:4b.

¹⁵⁶ RINAP 4 Esarhaddon 98: Rev. 18b–25a.

¹⁵⁷ RINAP 4 Esarhaddon 98: Rev. 25b–30a.

- 3- It can be proposed from evidence from Karmir-blur and Upper Anzaf that the need for space for storage materials increased. Thus, every conceivable space appears to have been used as storage. It appears that all sorts of metal objects were kept together in the same room. Extraordinarily, many metal artefacts, including votive objects, were kept in magazines with pithoi. Pithoi served as containers for many metal implements. This situation indicates an obvious lack of space, where scrap metal was stored with objects currently in use.
- 4- Dedicatory objects were sometimes hung on the walls using various types of nails. The fact that a large number of nails of different sizes have been found along with shields near the walls may indicate that some of these objects were hung on walls. This positioning of objects might have ensured the best use of space and may have also served a decorative function. The walls of the Ayanis temple courtyard were also decorated with votive weapons.¹⁵⁸ In the storerooms, some objects could have been packed either on clay benches or on wooden shelves.
- 5- Ornamented bronze sheets in the Upper Anzaf, Ayanis, and Çavuştepe fortresses have striking decorative elements which are unique to these rooms. Presumably some of them had votive purposes. Plates decorated with ornamental suns (Fig. 29), Teişeba on the bull (Fig. 30, right below, Fig. 31, top), a lion's mane (Fig. 31, bottom), and nested wavy lines (Fig. 30, top and middle) have been found in these rooms. It is possible to see sheets similar to the one at the Ayanis Fortress depicting a Teişeba figure on a bull in various other museums and collections.¹⁵⁹ The holes and some nails in them on the sides of the bronze sheets with sun motifs suggest to us that the plates were attached to wood and the whole was then affixed to walls or to the sides of doors, using nails. There is no indication that the plates belonged to any other object, such as chariots. Since they were fragmentary it is possible that the remains might have been scrap. Lion-mane motifs are also seen on the bronze sheet in the middle of the lion-headed shield that was found near the northern exterior wall of the Ayanis core temple.¹⁶⁰ It is possible that the aforementioned piece, found in the storage room of the temple, with a lion's-mane motif, is part of another shield bearing a lion's head protome; however, this must remain a presumption, since the rest of this room could not be unearthed, and the remaining pieces of the object could not be found.
- 6- The discovery of millet inside cauldrons and large jars in the Entrance Room at Ayanis, the room which enabled access to the other temple storerooms, is a first. It is known that rituals related to dry scattering/libation were carried out at the Ayanis temple and that quivers were filled with millet.¹⁶¹ The millet used during such ceremonies would have been provided from here.
- 7- In attempts to establish a connection between the written documents from the fortresses of Rusa II and the archaeological finds, we are faced with a different situation. Currently, it is clear due to the inscriptions from the Kef and Karmir-blur fortresses, and the temple blocks of Ayanis fortress that there was a group of structures specific to the Rusa II period;

¹⁵⁸ Çilingiroğlu 2005, pp. 31–38.

¹⁵⁹ Seidl 2004, pp. 169–198.

¹⁶⁰ Batmaz 2013.

¹⁶¹ Çilingiroğlu 2004b, pp. 257–267.

namely, *adunusini*, which cannot be translated. The systematic excavations at Ayanis temple showed that there was no building which corresponded to the meaning of this word in and around the temple, but storerooms under the courtyard, located in the southern part of the temple area, are good candidates. It is known that Rusa II introduced many novelties and changes to the operation of the kingdom. Taking this into account, an *adunusini* building could be part of those innovations brought in by the king in the military, economic, artistic and religious fields. However, more data is required to understand the place and operation of such buildings, mentioned in relation to the Ayanis, Kef, and Karmir-blur fortresses, in the new system of the kingdom.

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Abbreviations

- CTU I = Salvini, M., 2008, *Corpus dei Testi Urartei*, Vol. I, *Le iscrizioni su pietra e roccia. I testi* (Documenta Asiana 8/1) (CTU A: Inscriptions on Stones and Rocks). Rome: CNR Istituto di studi sulle civiltà dell'Egeo e del vicino oriente.
- CTU IV = Salvini, M., 2012, *Corpus dei Testi Urartei*, Vol. IV, *Iscrizioni Su Bronzi, Argilla Altri Supporti Nuove Iscrizioni Su Pietra Paleografia Generale* (Documenta Asiana 8/4) (CTU B: Inscriptions on Bronze Objects). Rome: CNR, Istituto di studi sulle civiltà dell'Egeo e del vicino oriente
- UKN I-II = Melikishvili, G. A., 1960, *Урартские Клинообразные Надписи I-II* (*Urartskije Klinoobraznyje Nadpisi I-II*). Moscow: Izdatel'stvo AN SSSR.
- RIMA 2 = Grayson, A. K., 1991, *Assyrian Rulers of the Early First Millennium BC I (1114-859 BC)* (Royal Inscriptions of Mesopotamia: Assyrian Periods 2). Toronto: University of Toronto Press.
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- RINAP 1 = Tadmor, H. and Yamada, S., 2011, *The Royal Inscriptions of the Neo-Assyrian Period, Vol. 1. The Royal Inscriptions of Tiglath-pileser III (744-722 BC) and Shalmaneser V (726-722 BC), Kings of Assyria*. Winona Lake, Ind.: Eisenbrauns.
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Table 1. Inscription Catalogue of Votives.

AYANIS (AY.)	<i>Rusa II</i>		
	Inscription (Transliteration)	Inscription (Translation)	Literature
AY.1 (Bronze Lion-Headed Shield) Temple Courtyard (by the north wall of the temple)	D ¹ hal-di-e e- ú -ri-e i-ni a-še m ¹ ru-sa-[a-še m ¹ ar-giš-te- hi-(ni-še) za-du]-ni uš-tú-ni ul-gu-ši-ia-ni e-di-ni te-ru-ni m ¹ ru-sa- ¹ hi-na-a KUR ¹ e-i-du-ru-ka-i D ¹ hal-di- ni-ni al-su-i-ši-ni m ¹ ru-sa-a-ni m ¹ ar-giš-te-e-hi MAN DAN-NU MAN al-su-[(i-ni MAN KUR) šú]-ra-a-u-e [(MAN)] KUR ¹ bi-a-i-na-u-e MAN? [tar? a?]-e a-lu-si URU tu-uš-pa-a U R U 2 m ¹ ru-sa- ¹ a-še ¹ a-li-e ¹ a-lu-še i-ni a-še ha- ú-li-e a-lu-še hi-pu ¹ _x (TUR)-li- ¹ e ¹ a-lu-še A ^{MES} hu-šú -li-e a-lu-še ú-li-e ú-ri-ni-e za-li a-lu-še K ¹ IM-a h [?]- pu ¹ _x (TUR)-li- ¹ e ¹ IZIM ¹ ES GIBIL ¹ ES a-lu-še ti- ni-ni tú-li-e ma-a-si ti-ni te-li-e tú -ri-ni-ni D ¹ hal-di-še ma-a-ni ti-i-ni N U M U N [N U M U N ?] N U M U N ^{MES} DUTU-ni-i-pi-[x?]	1 "To Haldi, (his lord), Rusa the son of Argišti, made and dedicated this shield for his life; he put it in Rusahinili Eidurukai. Through the Greatness of Haldi (I am) Rusa the son of Argišti, the mighty king, the great king, the king of the lands, the king of Biainili (Urartu) the strong (?) king, the lord of the city of Tušpa. 2 Rusa says: he who takes this shield, he who throws it, he who ...s waters, he who ...s, he who throws earth on fires and earth, he who effaces my name and puts his name, may God Haldi destroy him, his seed and the seed of his seed under the Sun(light)."	Salvini 2001b, pp. 271–272; CTU IV B 12-1; Seidl 2004, p. 41, (I. 13)
AY.2 (Bronze Shield) Monumental Gate (Room 4)	D ¹ hal-di-e e- ú -ri-e i-ni a-še m ¹ ru-sa-[a-še m ¹ ar-giš-te- hi]-ni-še [za-du-(ni uš-tú-ni ul-gu-ši-ia-ni e-di-ni te-ru-ni m ¹ ru-sa- ¹ hi-na-a KUR ¹ e-i-du-ru-ka-i D ¹ hal-di-ni-(ni al-)]su-i-ši-ni m ¹ ru-sa-a-ni m ¹ ar-giš-te-hi MAN [(DAN-NU MAN)] al-su-i-ni MAN KUR[šú]-ra-a-u-e [MAN] KUR ¹ bi-a- ¹ i ¹ [(na-u-e)] a-lu-si URU tu-ruš-pa-a URU	"To Haldi, (his lord), Rusa the son of Argišti, made and dedicated this shield for his life; he put it in Rusahinili Eidurukai. Through the Greatness of Haldi (I am) Rusa the son of Argišti, the mighty king, the great king, the king of the lands, the king of Biainili (Urartu) the strong (?) king, the lord of the city of Tušpa."	Salvini 2001b, p. 272; CTU IV B 12-4; Seidl 2004, pp. 41, 42, (I.14)
AY.3 (Bronze Shield) Temple Area (Storeroom 4)	D ¹ hal-di-e e- ú -ri-e i-ni a-še m ¹ ru-sa-a-še m ¹ ar-giš-te- hi-ni-še uš-tú -ni ul-gu-ši-ia-ni e-di-ni D ¹ hal-di-ni-ni al-su-i-ši-ni m ¹ ru-sa-a-ni m ¹ ar-giš-te- e-hi MAN DAN-NU a-lu-si URU tu-uš-pa-a-e URU	"To Haldi, (his lord), Rusa the son of Argišti, made and dedicated this shield for his life. Through the Greatness of Haldi (I am) Rusa the son of Argišti, the mighty king, the lord of the city of Tušpa."	CTU IV B 12-5; Seidl 2004, p. 42, (I. 16)
AY.4 A-E (Bronze Shield frags.) Temple Courtyard (NW of Pillar 7)	A D[(hal-di-e e-ú-ri-e i-ni a-še) ... (big gap)] (a-lu-si URU tu)]-uš-pa-a-e URU B]a-i[u-si C-D ... UR[U I D ¹ hal-d[i-e e-ú-ri-e ... e]-di-ni D[E]-tú -ni ul-gu-ši-ia-ni e-di-ni [Incomplete variation of AY.3 (Probably fragments of a same shield)	Salvini 2001b, pp. 272–274; CTU IV B 12-6a-e

AY.5 (Bronze Shield) Temple Courtyard (W of Pillar 6)	ul-gu]-ši-ia-ni e-di-[ni	Incomplete variation of AY.3	Salvini 2001b, p. 273; CTU IV B 12-7
AY.6 (Bronze Helmet) Temple Courtyard (N of Pillar 4)	1 D _{hal} -di-e EN-ŠÚ m _{ru} -sa-a-še m _{ar} -giš-te-ḫi-ni-še r uš'-tú -ni 2 D _{hal} - (incomplete) úr-iš- ḫi m _{iš} -pu-ú-i- ni-e-i	1 "To Ḫaldi, his lord, Rusa, the son of Argišti dedicated." 2 "Property of Išpuini"	Salvini 2001b, p. 275; CTU IV B 12-9; Seidl 2004, p. 41, (I.12)
AY.7 (Bronze Helmet) Temple Courtyard (N of Pillar 4)	m _{ru} -sa-a-še' uš'-tú -ni	"To Ḫaldi, his lord, Rusa dedicated."	Salvini 2001b, p. 275; CTU IV B 12-10; Seidl 2004, p. 41, (I.11)
AY.8 (Brass Lance-Šuri) Temple Courtyard (SE corner of Pillar 1)	1 D _{hal} -di-e EN-ŠÚ i-ni šu-ri 2 m _{ru} -sa-še m _{ar} -giš-te-ḫi-ni-še 3 za-du-ni uš-t ú - ú -ni 4 ul-gu-ši-ia-ni e-di-ni	"To Ḫaldi, his lord, Rusa, the son of Argišti, made and dedicated this lance for his life."	Salvini 2001b, p. 275; CTU IV B 12-11; Seidl 2004, p. 42, (I.29)
AY.9 (Bronze Spearhead) Temple Area (Storeroom 3)	D _{hal} -di-e EN-ŠÚ m _{ru} -sa-še m _{ar} -giš-te-ḫi-ni-še uš-t ú-ni	"To Ḫaldi, his lord, Rusa, the son of Argišti, dedicated."	Salvini 2001b, p. 275; CTU IV B12-12; Seidl 2004, p. 42, (I.28)
AY.10 A-D (Four Bronze Mushroom- Headed Nails-Sikkatu) Temple Courtyard (by the N face of the temple)	D _{hal} -di-e r EN ʾ-ŠÚ m _{ru} -sa-še m _{ar} -giš-te-ḫi-ni-še uš-t ú-ni	"To Ḫaldi, his lord, Rusa, the son of Argišti, dedicated."	Salvini 2001b, p. 276; CTU IV B12-14A-D; Seidl 2004, p. 40, (I.3-6)
AY.11 (Bronze Mushroom-Headed Nail-Sikkatu) Temple Area (Entrance Room)	D _{hal} -di-e r EN ʾ-[(ŠÚ m _r)]u-sa-še m _{ar} -giš-te-ḫi- <ni-še> uš-t ú-<ni>	As AY.10	Salvini 2001b, p. 276; CTU B 12-14E; Seidl 2004, p. 40, (I.7)

AY.12 (Two Massive Bronze Cylinders) Temple Courtyard (N and S of the eastern gate of the temple area)	D _ḫ al-di-e EN-ŠÚ ^m ru-sa-še ^m ar-giš-te-ḫi-ni-še uš-t ú-ni	“To <i>Ḫaldi</i> , his lord, <i>Rusa</i> , the son of <i>Argišti</i> , dedicated.”	Salvini 2001b, p. 275; CTU B IV 12-13A-B; Seidl 2004, p. 40, (I.1), (I.2)
<i>Argišti II</i>			
	Inscription (Transliteration)	Inscription (Translation)	Literature
AY.13 (Bronze Shield) Temple Area (Storeroom 4)	D[ḫal-di-e e-ú-ri-e i-ni a-še ... (big gap) ^m ar-gi-iš-ti-ni MAN <i>DAN-NU</i> a-lu-si URU ^u ṭu-uš-pa-a URU	“To <i>Ḫaldi</i> , his lord, this shield(big gap) (<i>I am</i>) <i>Argišti</i> , mighty king, lord of the city of <i>Tušpa</i> .”	CTU B IV 11-4; Seidl 2004, p. 40, (H.6)
AY.14 (Bronze Helmet) Temple Area (Storeroom 4)]x ^m ar-giš-ṭi-i?¹-še ^m ru-sa-ḫi-ni-še [Incomplete	CTU B IV 11-3; Seidl 2004, p. 40, (H.1)
<i>İşpuini</i>			
YUKARI (UPPER) ANZAF (YAK.)	Inscription (Transliteration)	Inscription (Translation)	Literature
YAK.1 (Fragment of Bronze Sword) Room 9	Reverse 1 [x x] x u? I? x-ni ul-gu-si-ia[-ni] e-di-ni 2 [x x] x a-i x ni [x x] x ia x x [x x x] Obverse 1 ^D ḫal-di-e e-ú-ri-e ^m iš-pu-ú-i-ni-[še] 2 ^{mD} šar-ḫu-ri-ḫi-ni-še uš-[nu-]ni	Reverse “... for his life ...” Obverse “To <i>Ḫaldi</i> , (his lord), <i>İşpuini</i> son of <i>Sarduri</i> dedicated.”	CTU B 2-1; Belli, Dinçol and Dinçol 2004, pp. 5–6.
	Inscription (Transliteration)	Inscription (Translation)	Literature
YAK.2A (Bronze Ring) Grand Reception Hall	şil-li ^D ḫal-di-e ^m iš-[pu-ú-]ni apil(A) ^{mD} şar-duri šarru(MAN) rabu(GAL) šarru(MAN) dan-nu šar ₄ kiššari(ŠÚ) šar ₄ KUR nairi URU ^u ṭi-ru-ḫi-e ti-li an-ni-ú bi-bu ištu(TA) na-ši ana ^D ḫal-di-e bel(EN)-šú [...] ana napišti(ZI)-şú iqiš(BA)		

YAK.2B (Bronze Ring) Grand Reception Hall	<p>šil-li D_{hal}-di-e m_{iš}-pu-ú-i-ni apil(A) m^Dšar₅-duri šarru(MAN) rabu(GAL-ú) šarru(MAN) dan-nu šar₄ kiššati(ŠÚ) šar₄ KUR na-i-ri URU ú-ti-ru-ḫi-e-i til-li an-ni-ú bi-bu ištu(TA) lib-bi na-ši ana D_{hal}-di-e belī (EN)-šú [...] ana napištī (ZD)-šú iqiš(BA)</p>	As YAK.2E	CTU B IV 2-7 A,B,C,D,E; Belli, Dinçol and Dinçol 2009.
YAK.2C (Bronze Ring) Grand Reception Hall	<p>šil-li D_{hal}-di-e m_{iš}-pu-ú-i-ni apil(A) m^Dšar₅-duri šarru(MAN) rabu(GAL-ú) šarru(MAN) dan-nu šar₄ kiššati(ŠÚ) šar₄ KUR na-i-ri URU ú-ti-ru-ḫi-e-i til-li an-ni-ú bi-bu ištu(TA) na-ši ana D_{hal}-di-e belī (EN)-šú [...] ana napištī (ZD)-šú iqiš(BA)</p>		
YAK.2D (Bronze Ring) Grand Reception Hall	<p>šil-li D_{hal}-di-e m_{iš}-pu-ú-i-ni apil(A) m^Dšar₅-duri šarru(MAN) rabu(GAL-ú) šarru(MAN) dan-nu šar₄ kiššati(ŠÚ) šar₄ KUR na-i-ri URU ú-ti-ru-ḫi-e-i til-li an-ni-ú bi-bu ištu(TA) lib-bi na-ši ana D_{hal}-di-e belī (EN)-šú [...] ana napištī (ZD)-šú iqiš(BA)</p>		
YAK.2E (Bronze Ring) Grand Reception Hall	<p>šil-li D_{hal}-di-e m_{iš}-pu-ú-i-ni apil(A) m^Dšar₅-duri šarru(MAN) rabu(GAL-ú) šarru(MAN) dan-nu šar₄ kiššati(ŠÚ) šar₄ KUR na-i-ri URU ú-ti-ru-ḫi-e-i til-li an-ni-ú bi-bu ištu(TA) lib-bi na-ši ana D_{hal}-di-e belī (EN)-šú [...] ana napištī (ZD)-šú iqiš(BA)</p>	<p>“Through the protection of Ḫaldi, Išpuini, son of Sarduri, the great king, mighty king, king of all, king of the land of Naíri, brought this bibu arsenal (?) of the city of Uṭirubī (or: he took away this votive object out of the storehouse of the city of Uṭirubī), and dedicated it to Ḫaldi, his Lord, for his life.”</p>	
<i>Išpuini and Menua</i>			
	Inscription (Transliteration)	Inscription (Translation)	Literature
YAK.3 (Bronze Shield) Room in Temple West Courtyard	<p>D_{hal}-di-e e-ú-ri-e m_{iš}-pu-ú-i-ni-še m^Dšar₅-du-ri-ḫi-ni-še mⁱ[mi-nu-a-še m_{iš}-pu]-ú-[i-ni-ḫi-ni-še ... (big gap) ... a-lu-si(?) URU₁ul-uš₁-pal-a URU!</p>	<p>“To Ḫaldi, (their) Lord, Išpuini, son of Sarduri, (and) [Minua, son of Išpu]ini ... (big gap, then titling) ... lord] of the city of Ṭuspa.”</p>	CTU IV B 3-1; Belli 1998, p. 71; Seidl 2004, p. 23, (B/C.1)

	<i>Išpuini, Menua and Inišpua</i>	Inscription (Transliteration)	Inscription (Translation)	Literature
YAK.4A (Bronze Ring) Room in Temple West Courtyard	<p>1 ^Dḫal-di-e e- ú-ri-e [(^miš-pu-ú-i-ni-še ^m)] ^D sar₅-du-ri-ḫi-ni- še</p> <p>2 [(^mmi-nu-a-še ^miš-pu)]- ú-i-ḫi-ni-še ^mi-nu-uš-pu-a-še ^mmi-nu-a-ḫi-ni-še</p> <p>3 [(uš-ti-tu i)]-ú URU a-mu-ša-ni KUR-ni-e ḫa-i-tú</p>		<i>“To Ḫaldi, (their) Lord, Išpuini son of Sarduri, Minua, son of Išpuini, and Inišpua, son of Minua, dedicated when they conquered the country in the city of Amuša.”</i>	CTU IV B 4-1 A,B,C,D; Dinçol and Dinçol 1995, pp. 30–31; Seidl 2004, p. 23; (B/C/D.1, 2, 3, 4)
YAK.4B (Bronze Ring) Room in Temple West Courtyard	<p>1 ^Dḫal-d[(i-e e-ú-ri-e ^miš-pu-ú-i-ni-še ^mD sar₅-du-r)] i-ḫi-ni- še [(^mmi-nu-a-še ^miš-pu)]-ú-i-^rni-ḫi-ni^r - [(še)]</p> <p>2 ^mi-[(nu)]-uš-pu-a-še ^m[(mi-nu-a)]-ḫi-[(ni-š)]e ti-tú i-ú ^rURU^r a-m[(u-š)] a-ni KUR-ni-e ḫa-i-t[ú]</p>		As YAK.4A	
YAK.4C (Bronze Ring) Room in Temple West Courtyard	<p>^Dḫal-d[(i-e e-ú-ri-e ^miš-pu-ú-i-ni-še ^mD sar₅-du-r)] i-ḫi-ni- še [(^mmi-nu-a-še ^miš-pu)]- ^rú^r-i-ni-ḫi-ni-[(še)]</p>			
YAK.4D (Bronze Ring) Room in Temple West Courtyard	<p>1 ^Dḫal-d[i]-e e-ú-ri-e ^miš-pu-ú-i-ni-[(š)]e ^mD₅[ar₅-du-r]i-ḫi-[ni] - še ^mmi-nu-a-[(še ^mi]š-pu-ú-i-ni-ḫi-n-[(iš)]e</p> <p>2 [(^mi-nu-uš-pu-a-še ^mmi-nu-a-ḫi-ni-š)]e uš-[ti]-tú ^ri^r?-ú ^rURU^r a-mu-ša-ni KUR-ni-e ḫa-i-tú</p>			
YAK.5 (Bronze Ring) Room in Temple West Courtyard	<p>1 [^rx ma-si-ni ^ri^r-ú ha-n[i?] UR^rU^r a-mu-ša-ni KUR-n[i-e]</p> <p>2 [^rUR U^ra-mu]-^rša^r-ni KUR-ni-e [^rdi?]^r [^ruš-^rtu^r-li ^miš-pu-^rú^r-[i-ni-ni ^mD sar₅-d] u-ri-ḫi ^mmi-nu-a-ni ^miš-pu-ú-^ri-ni-ḫi^r ^mi^r-^rnu^r-uš-pu-^ra-ni^r]</p> <p>4 [(^mmi-nu) -^ra-ḫi^r [^Dḫal-di-e] ^re-ú^r-ri-i-e [</p>		Incomplete	CTU IV B 4-2; Dinçol and Dinçol 1995, p. 32; Seidl 2004, p. 24; (B/C/D.5)
YAK.6 (Bronze Ring frags.) Room in Temple West Courtyard	<p>Fig.1 1]x ù lu x[2 ^mme]nu-a[Fig.2 1 uš-tu]-li ^miš-p[u-ú-i-ni-ni ... 2 ... ^Dḫal-d]i-e e-^rú^r-[ri-e</p>		Incomplete	CTU B 4-3a-b, Dinçol and Dinçol 1995, pp. 32–33.

	<i>Menua</i>			
	Inscription (Transliteration)	Inscription (Translation)	Literature	
YAK.7 (Bronze Arrowhead) Room 9	1 D ^h al-di-i-e 2 ^m mi-nu-a-še uš-tú-ni	" <i>To Haldi, (his lord), Minua dedicated/voted.</i> "	CTU IV B 5-6; Belli, Dinçol and Dinçol 2004, p. 5.	
YAK.8 (Bronze Plaque) Great Storeroom II	1 D ^h al-di-e 2 e-ú-ri-e 3 i-ni a-še 4 ^m mi-nu-a-še 5 uš-tú-ú-ni	" <i>To the god Haldi, (his) Lord, Minua dedicated/voted this shield.</i> "	CTU IV B 5-7; Belli, Dinçol and Dinçol 2004, pp. 4-5.	
	<i>Argišti II</i>			
	Inscription (Transliteration)	Inscription (Translation)	Literature	
YAK.9 (Bronze Quiver) Temple Courtyard	D ^h al-di-e EN-ŠŪ ^{ma} r-giš-ti-še ^m ru-sa-ḫi-ni-še <i>uš-tu-[ni]</i>	" <i>To Haldi, (his) lord, Argišti, son of Rusa dedicated.</i> "	CTU IV B II-1; Dinçol and Dinçol 1995, p. 37; Seidl 2004, p. 40, (H.3)	
YAK.10 (Bronze Shield) Temple Courtyard	D ^h al-di-e e-ú-ri-e i-ni a-še ^m ar-gi-iš-ti-še ^m ru-sa-ḫi-ni-še uš-tú-ni ul-gu-ši-ia-ni [e-]di-ni [D ^h al]-di-ni-ni [al-su-i-ši-ni] ^m ar-gi-iš-ti-ni ^m ru-sa-a-ḫi] MAN DAN-M[U a-]lu-si URU-tu-[uš-pa]-e URU	" <i>To Haldi, (his) Lord, Argišti, son of Rusa, dedicated this shield for his life. Through the [Greatness of Haldi (I am) Argišti, the son of Rusa], mighty king, lord of the city of Tušpa].</i> "	CTU IV B II-2; Dinçol and Dinçol 1995, p. 37; Seidl 2004, p. 40, (H.2)	
AZNAVURTEPE (AZ.)	<i>Menua</i>			
	Inscription (Transliteration)	Inscription (Translation)	Literature	
AZ.1 (Bronze Candelabrum)	1 D ^h al-di-e e-ú-ri-e i-ni da-šú-ú-si 2 ^m mi-nu-a-še ^m iš-pu-ú-i-ni-e-ḫi-ni-še 3 uš-tú-ni D ^h al-di-ni al-su-i-ši-ni 4 ^m mi-nu-a-ni MAN DAN-NU MAN KUR ^{bi} -a-i-na-ú-e	" <i>To Haldi, (his) Lord, Minua, son of Išpuini, dedicated this candelabrum. Through the Greatness of Haldi (I am) Minua, mighty king, king of Biainili.</i> "	CTU IV B 5-9; Seidl 2004, p. 25, (C.11)	

KARMIR BLUR (KB.)	<i>Argišti I</i>	Inscription (Transliteration)	Inscription (Translation)	Literature
KB.1 (Bronze Shield) Room 3		<p>1 ^mar-gi-iš-ti-ni-i ù-ri-iš-ḥu-si-ni-i ^mmì-nu-a-ḥi-ni-i i-ni a-še ^mar-gi-iš-ti-ni ^mmì-nu-a-ḥi MAN DAN-NU MAN al-su-i-ni MAN KUR^{bi}-i-a-na-ú-e a-lu-si URU^{tu}-uš-pa URU</p> <p>2 ^Dḥal-di-e e-ú-ri-e i-ni a-še ^mar-gi-iš-ti-še ^mmì-nu- a <ḥi>-ni-še uš-ru-ni ^Dḥal-di-ni-ni al-su-i-(š)-ni ^mar-gi-iš-ti-ni ^mmì-nu-a-ḥi MAN DAN-NU MAN al-su-i-ni MAN KUR^{bi}-i-a-na-ú-e a-lu-si URU^{tu}-uš-pa URU</p>	<p>1 “This shield is treasure of Argišti, the son of Minua, mighty king, great king, king of Biainili, lord of the city of Tūšpa.”</p> <p>2 “To the god Ḫaldi, (his) Lord, Argišti, the son of Minua, dedicated this shield. Through the Greatness of Ḫaldi, (I am) Argišti, son of Minua, mighty king, great king, king of Biainili, lord of [the city of Tūšpa].”</p>	CTU IV B 8-1; Seidl 2004, p. 30, (E.9); UKN: 144
KB.2 (Bronze Shield) Room 28 Pith.46		<p>1 ^mar-gi-iš-ti-[ni] ú-ri-iš-ḥu-si-ni-e-i ^mmì-nu-a- ḥi-ni-i i-ni a-še ^mar-gi-iš-ti-ni ^mmì-nu-a-ḥi MAN DAN-NU MAN al-su-ú-i-ni MAN KUR^{bi}-a-i-na- ú-(e) a-lu-si-e URU^{tu}-uš-pa URU</p> <p>2 ^Dḥal-di-e e-ú-ri-e i-ni a-še ^mar-gi-iš-ti-še ^mmì-nu-a-ḥi-ni-še URU^{er}-bu-ni-e-[di] uš-tú-ni ^Dḥal-di-ni-ni al-su-i-ši-ni ^mar-gi-iš-ti-ni MAN DAN-NU MAN al-su-i-ni MAN KUR^{bi}-a-na-ú-e a-lu-si URU^{tu}-uš-pa URU</p>	<p>1 “This shield is treasure of Argišti, the son of Minua, mighty king, great king, king of Biainili, lord of the city of Tūšpa.”</p> <p>2 “To the god Ḫaldi, (his) Lord, Argišti, the son of Minua, dedicated this shield to (or: for the) city of Erbuni. Through the Greatness of Ḫaldi, (I am) Argišti, son of Minua, mighty king, great king, king of Biainili, lord of [the city of Tūšpa].”</p>	CTU IV B 8-2; Seidl 2004, p. 30, (E.10); UKN 145
KB.3 (Bronze Shield) Room A		<p>1 ^Dḥal-di-e e-ú-ri-e i-ni a-še ^mar-gi-iš-ti-[še] ^mmì-nu-a-ḥi-ni-še URU^{er}-bu-ni-e-di uš-tú-ni ^mar-gi-[iš]-ti-ni [^m]mì-[nu]-a-ḥi-e MAN DAN-NU MAN KUR^{bi}-a-na-[ú-e] a-lu-si URU^{tu}-uš-pa URU</p> <p>2 ^Dḥal-di-e e-ú-ri-e i-ni a-še ^mar-gi-[iš]-ti-še ^m[mì-nu]-a-ḥi-ni-še URU^{er}-bu-ni-e-[di] uš-tú-ni ^mar-gi]-iš-[ti]-ni [^mmì-nu]-a-ḥi-e MAN DAN-NU MAN KUR^{bi}-a-na-ú-[e] a-lu-si URU^{tu}-uš-pa URU</p>	<p>1 “To the god Ḫaldi, (his) Lord, Argišti, the son of Minua, dedicated this shield to (or: for the) city of Erbuni. Argišti, son of Minua, mighty king, king of Biainili, lord of the city of Tūšpa.”</p> <p>2 “To the god Ḫaldi, (his) Lord, Argišti, the son of Minua, dedicated this shield to (or: for the) city of Erbuni. Argišti, son of Minua, mighty king, king of Biainili, lord of the city of Tūšpa.”</p>	CTU IV B 8-3; Seidl 2004, pp. 30–31, (E.11); UKN 146.
KB.4 (Bronze Shield) Room 34		<p>1 ^Dḥal-di-e e-ú-ri-e i-ni a-še ^mar-gi-iš-ti-še ^mmì-nu-a-ḥi-ni-še URU^{er}-bu-ni-e-di uš-tú-ni ^mar-gi-iš-ti-ni MAN DAN-NU MAN al-su-i-ni MAN KUR^{bi}-a-na-ú-e a-lu-si URU^{tu}-uš-pa URU</p> <p>2 ^Dḥal-di-e e-ú-ri-e i-ni a-še ^mar-gi-iš-ti-še ^mmì-nu-a-ḥi-ni-še URU^{er}-bu-ni-e-di uš-tú-ni ^mar-gi-iš-ti-ni MAN DAN-NU MAN al-su-i-ni MAN KUR^{bi}-a-na-ú-e a-lu-si URU^{tu}-uš-pa URU</p>	<p>1 “To the god Ḫaldi, (his) Lord, Argišti, the son of Minua, dedicated this shield to the city of Erbuni. Argišti, mighty king, great king, king of Biainili, lord of the city of Tūšpa.”</p> <p>2 “To the god Ḫaldi, (his) Lord, Argišti, the son of Minua, dedicated this shield to the city of Erbuni. Argišti, mighty king, great king, king of Biainili, lord of the city of Tūšpa.”</p>	CTU IV B 8-4; Seidl 2004, p. 31 (E.14); UKN 147

KB.14 (A button of armour) Room 36	Obverse 1 ^D hal-di-e e-ú-ri-e i-ni 2 i-ni qar-qa-ra-ni ^m ar-giš-ti-še NÍG.BA Reverse ša ^m ar-gi-iš-ti	Obverse “ <i>To Haldi, (his) lord, Argišti dedicated this armour.</i> ” Reverse “ <i>of Argišti</i> ”	CTU IV B 8-17; Seidl 2004, p. 32, (E.27); UKN 149a
KB.15 (Bronze Arrowhead) Room 36	1 ^D hal-di-e 2 ^m ar-giš-ti-še BA	“ <i>To Haldi, Argišti dedicated.</i> ”	CTU IV B 8-18; Seidl 2004, p. 31, (E.19); UKN 149b
KB.16 (Massive Bronze Cylinder)	1 ^D hal-di-e EN-ŠÚ i-ni i-si-qi ^{GI} NA-ei ^m ar-giš-ti-še 2 ^m mi-nu-a-ḫi-ni-še za-du-ni i-ú URU er-bu-ni-ni ši-di-iš-tú-ú-ni	“ <i>For Haldi, his Lord, Argišti, son of Minua, made this isiqi of GÍNA-e-i (a musical instrument?) when built the city of Erbuni.</i> ”	CTU IV B 8-21; Seidl 2004, p. 33, (E.38); UKN II 409
<i>Sarduri II</i>			
	Inscription (Transliteration)	Inscription (Translation)	Literature
KB.17 (Bronze Shield) Room A	^D hal-di-e [(e-ú-ri-e i-ni a-še)] ^m D sar-du-ri-še [(^m ar-giš-ti-ḫi)]-ni-še uš-tú-ú-ni ^m D sar- ⁱ du ¹ -ri-[ni MAN <i>DAN-NU</i>] MAN KURbi-a-i-na-a-ú-e [(a-lu)]-si si URU tu-uš-pa-a-e URU	“ <i>To Haldi, Lord, Sarduri, son of Argišti, dedicated this shield. (I am) Sarduri, mighty king, king of Biainili, lord of the city of Tušpa.</i> ”	CTU IV B 9-1; Seidl 2004, p. 36, (F.98); UKN 173
KB.18 (Bronze Shield) Room 33	[(^D hal-di-e) e-ú-ri-e i-ni a-še (^m D sar-du-ri-še)] ^m ar-giš-ti-ḫi-(ni-še uš-tú-ú-ni) ^m]D sar-du-[ri-ni MAN <i>DAN-NU</i>] MAN KURbi-a-i-na-a-ú-e a-lu-si [(URU tu-uš-pa)] pa-ta-ri	A variation of KB.17	CTU IV B 9-2; Seidl 2004, p. 36, (F.99); UKN 173a
KB.19 (Bronze Shield) Room 38	^D hal-di-e e-ú-ri-e i-ni a-še ^m D sar-du-ri-še ^m ar-giš-ti-ḫi-ni-še [(uš-tú-ú-ni)]-ni ^D hal-di-ni-ni al-su-i-[ši-ni] ^m D sar-du-[ri-ni MAN <i>DAN-NU</i>] MAN al-su-i-ni MAN KURbi-a-i-na-a-ú-e a-lu-si-e URU tu-uš-pa-a-e URU-e	“ <i>To Haldi, Lord, Sarduri, son of Argišti, dedicated this shield. Through the Greatness of Haldi (I am) Sarduri, mighty king, great king, king of Biainili, lord of the city of Tušpa.</i> ”	CTU IV B 9-3; Seidl 2004, pp. 35-36, (F.97); UKN 173b
KB.20 (Bronze Helmet) Room 10	^D hal-di-e e-ú-ri-e i-ni ku-bu-še ^m]D sar-du-ri-i-še ^m ar-giš-ti-ḫi-ni-še uš-tú-ni ul-gu-ši-ia-ni e-di-ni	“ <i>To Haldi, (his) Lord, Sarduri, son of Argišti, dedicated this [helmet] for his life.</i> ”	CTU IV B 9-8A; Seidl 2004, p. 34, (F.86); UKN 174

KB.21 (Bronze Helmet) Room 23	[^D hal-di-e] e-ú-ri-e i-ni ku-bu-še m ^D sar-du-[ri-i-še m _{ar} -gš-ti-ḥi-ni-še uš-tú-ni ul-gu-ši-ia-ni e-di-ni]	As KB.20	CTU IV B 9-8B
KB.22 (Bronze Helmet) Room 23	D ^{hal} -di-e EN-ŠÚ i-ni ku-bu-še m ^D sar-du-ri-i-še m _{ar} -gš-ti-ḥi-ni-še NÍG.BA	“To Ḥaldi, his Lord, Sarduri, son of Argišti, dedicated this helmet.”	CTU IV B 9-9; Seidl 2004, p. 34, (F.87); UKN II 427
KB.23 (Bronze Quiver) Room 13	D ^{hal} -di-e EN-ŠÚ m ^D sar-du-ri-i-še NÍG.BA	“To Ḥaldi, his Lord, Sarduri offered.”	CTU IV B 9-10; Seidl 2004, p. 36, (F.101); UKN 175
KB.24 (Bronze Quiver)	D ^{hal} -di-e EN-ŠÚ i-ni gur-bi-ni(?) m ^D sar-du-ri-še NÍG.BA	“To Ḥaldi, (his) lord, Sarduri offered this quiver.”	CTU IV B9-II; Seidl 2004, p. 36, (F.103); UKN II 428
KB.25 (Bronze Quiver) Room 5	[^D hal-d[i]-e EN-ŠÚ i-ni [gur-bi-ni(?)] m ^D sar-du-[ri-i-še NÍG.BA]	“To Ḥaldi, his Lord, Sarduri offered this [quiver].”	CTU IV B 9-12; Seidl 2004, p. 36, (F.102); UKN 176
KB.26A-C (Three Bronze Arrowheads) Room 36	Obverse 1 D ^{hal} -di-e 2 e-ú-ri-e Reverse 1 m ^D sar-du-ri-i-še 2 uš-tú-ni	“To Ḥaldi, his Lord, Sarduri dedicated.”	CTU IV B 9-13A-C; Seidl 2004, p. 36, (F.105-107); UKN 176a,b,c
Rusa I			
	Inscription (Transliteration)	Inscription (Translation)	Literature
KB.27 (Bronze Shield) Room 28 Pith. 50	D ^{hal} -di-[e] EN-ri i-ni [a-še m ₁]u-sa-a-še m ^D sar-du-ri-ḥi-ni-še uš-tú-ni ul-gu-ši-[ia-ni e-di-ni D ^{hal} -di-ni-ni al-su-i]-ši-ni [m ₂ ru-sa-a-ni m] D ^{sar} -du-[ri-ḥi MAN] DAN-NU MAN al-su-[i]-ni [MAN KURbi-a-i-na-ú-e a-lu-si] URU [uš-pa URU]	“To Ḥaldi (his) Lord, this [shield] Rusa, son of Sarduri, dedicated [for his] life. [Through the great]ness [of Ḥaldi (I am) Rusa, son of] Sarduri, king] powerful, great king, [the king of Biainili, lord of the city of] Tušpa.”	CTU B IV 10-1; Seidl 2004, p. 39, (G.12); UKN 269
Sarduri III			
KB.28 (Bronze Shield) Room 53	[^D hal-di-e e-ú-ri-e (?) i-ni a-še] m ^D sar-du-ri-e! -[še] m ^D sar-du-ri-ḥi-ni-še uš-tú-ni [ul-gu-ši-a-ni] edi-ni [^D hal-di-ni-ni al-[su-i-ši-ni m ^D sar-du-ri-ni ... ?] MAN DAN-NU MAN al-su-i-ni MAN KUR[šu]-ra-a-u-e [MAN] KURbi-a-i[(na-u-e)] a-lu-si URU tu-ruši-pa-e URU	“To Ḥaldi, (his) lord (?), Sarduri, son of Sarduri, dedicated this shield for his life. Through the Greatness of Ḥaldi I am Sarduri, son of Sarduri, the mighty king, the great king, the lord of the city of Tušpa.”	CTU B IV 16-1; Seidl 2004, p. 43, (L.1); UKN II 459

TOPRAKKALE (TOP.)	Rusa II			
	Inscription (Transliteration)	Inscription (Translation)	Literature	
TOP.1 (Bronze Shield) Temple Area	D ¹ [(ḫal-di-e e-ú-ri-e i-ni a-še ^m ru-sa-a-še ^m ar-giš-ti-ḫi-ni-še uš-tú-ni ul-gu-ši-ia-ni e-di)]i-ni D ² ḫal-di-ni-ni al-su-i-ši-ni ^m ru-sa-a-ni ^m ar-giš-te-[(ḫi)] MAN <i>DAN-NU</i> a-lu-si ^{URU} ṭu]-uš-pa-a-e URU	As AY.3	CTU B IV 12-8; Seidl 2004, p. 42, (I.23); UKN 282 and 296a	
	Rusa III (Ermenahi)			
	Inscription (Transliteration)	Inscription (Translation)	Literature	
TOP.2 (Bronze Shield)	D ¹ ḫal-di-e e-ú-ri-e i-ni a-še ^m ru-sa-a-še ^m e-ri-me-na-ḫi-ni-še uš-tú-ni ul-gu-ši-ia-ni e-di[i-ni] D ² ḫal-di-ni-ni al-su-i-ši-ni ^m ru-sa-a-še ^m e-ri-me-na-a-ḫi MAN DAN-NU <a-lu-si> ^{URU} ṭu-uš-pa-e URU	"To Ḫaldi, (his) Lord, Rusa, son of Erimena, offered this shield for his life. Through the Greatness of Ḫaldi (I am) Rusa, son of Erimena, mighty king, lord of the city of Ṭuṣpa. "	CTU B IV 14-1; Seidl 2004, p. 42, (K.1)	
TOP. 3 (Bronze Shield)	1 D ¹ ḫal-di-e EN-ŠÚ i-ni a-še ^m ru-sa-a-še ^m e-[(ri-me)]- na-ḫi-ni-še [(uš-tú)]-ni ul-gu-ši-ia-ni e-di-ni 2 D ² ḫal-di-ni-ni a[(l)]-su-i-ši-[(ni)] ^m [(r)]u-sa-a-<ni> MAN <i>DAN-NU</i> a-[(lu-si ^{URU} ṭu-uš-pa-a-e URU)]	A variation of TOP.2	CTU IV B 14-2; UKN 292	
TOP. 4 (Bronze Shield)	D ¹ ḫal-di-e EN-ŠÚ i-ni a-še ^m ru-sa-a-[(še ^m e)]-ri- me-na-ḫi-ni-še uš-[(tú)]-ni ul-gu-ši-ia-ni e-di-ni D ² ḫal-di-ni-ni al-su-i-ši-[(ni)] ^m [r]u-sa-[(ni)] MAN <i>DAN-NU</i> <a-lu-si> ^{URU} ṭuš-pa-e URU	A variation of TOP.2	CTU IV B 14-3; Seidl 2004, p. 43, (K.5); UKN 293	
TOP. 5 (Bronze Shield)	[(^D ḫal-di-e)] EN i-ni a-še ^m ru-sa-a-še [(^m)e-[(ri-me)]- na-ḫi-ni-[(še uš)]-tú-ni [(ul-gu-ši-ia-ni e-di-ni D ² ḫal-di-ni-ni al-su-i-ši-ni ^m ru-sa-a-ni ^m e-ri-me-na-a-ḫi MAN <i>DAN-NU</i> a-lu-si ^{URU} ṭu-uš-pa-e URU)]	A variation of TOP.2	CTU IV B 14-4; Seidl 2004, p. 43, (K.3)	
TOP. 6 (Bronze Shield)	[(^D ḫal-di-e) ... (i-ni a)]-še ^m ru-sa-[(a-še ^m)e-ri- me-na-ḫi-ni-[(še uš-tú)]-ni ul-gu-ši-ia-ni e-di-ni D ² ḫal-di-ni-ni al-su-i-ši-ni ^m ru-sa-a-ni ^m e-ri-me-na- a-ḫi MAN <i>DAN-NU</i> a-lu-si ^{URU} ṭu-uš-pa-e URU)]	A variation of TOP.2	CTU IV B 14-5; UKN 295	

TOP. 7 (Bronze Shield)	[(^D hal-di-e) ... (i-ni a-še ^m ru-sa-a-še ^m e-ri-me-na-ḫi-ni-še uš-tú-ni ul-gu-ši-ia-ni)] e-di-ni ^D hal-di-ni-ni al-su-i-ši-ni ^m ru-sa-a-ni ^m e-ri-me-na-a-ḫi MAN <i>DAN-NU</i> a-lu-si-[(e ^{URU} ṭu- uš-pa-e URU)]	A variation of TOP.2	CTU IV B 14-6; Seidl 2004, p. 43, (K.6)
TOP. 8 (Bronze Shield) South-West Corner of Temple Area (4 m away from temple)	[(^D hal-di-e) ... (i-ni a-še)] ^m ru-sa-a-še ^m e-ri-me-na-ḫi-ni-še [(uš-tú)]-ni ul-gu-ši-ia-ni [(e)]-di-ni ^D hal-di-ni-ni al-[(su-i-ši)]-ni ^m [(ru-sa-a)]-ni ^m e-ri-me-na-a-ḫi MAN <i>DAN-NU</i> a-lu-si ^{URU} ṭu- uš-pa-e URU)]	A variation of TOP.2	CTU IV B 14-7; Seidl 2004, p. 43, (K.4)
TOP. 9 (Bronze Shield)	[(^D hal-di-e) ... (i-ni a-še ^m ru-sa-a-še ^m e-ri)-me-na-ḫi-[(ni-še uš-tú-ni ul-gu-ši)]-ia-ni [(e-di-ni ^D hal-di-ni-ni al-su-i-ši-ni ^m ru-sa-a)]-ni MAN <i>DAN-NU</i> [(a-lu-si ^{URU} ṭu- uš-pa-a-e)] URU	A variation of TOP.2	CTU IV B 14-8; UKN 294
TOP. 10 (Bronze Shield) Temple Area	... (^m ru-sa-a-ni ^m e-ri-me)]-na- ^f a-ḫi ^r MAN <i>DAN-NU</i> MAN a[l-su-i]-ni-a-lu-si ^{URU} ṭu(DU)-uš-pa [-e? (URU)]	A variation of TOP.2	CTU B 14-9; Seidl 2004, p. 43, (K.2); UKN 287
TOP. 11 (Bronze Shield)	[(^D hal-di-e EN i-ni a-še)] ^m ru-sa-a-še ^m e-ri-me-na-ḫi-ni-še uš-tú-ni ul-gu-ši-i[(a-ni e-di-ni ^D hal-di-ni-ni al-su-i-ši-ni ^m ru-sa-a-ni ^m e-ri-me-na-a-ḫi MAN <i>DAN-NU</i> a-lu-si ^{URU} ṭu-uš-pa-e URU)]	A variation of TOP.2	CTU B 14-11; Seidl 2004, p. 43, (K.7); UKN 290

Table 2. Inscribed Bronze Votive Objects from Urartian Fortresses.

	Shields <i>aše</i>	Helmets <i>kubuše</i>	Quivers <i>gurbini</i>	Arrowh.	Spearh.	Candelabra <i>dašusi</i>	Sword	Ring	Lance <i>šuri</i>	Msh-h. Nail <i>sikkatu</i>	Plaque (Shield?)	Armour (Button) <i>qarqarani</i>	Cylinder <i>isiqi</i> <i>GISNA₃ ei</i>
Upper Anzaf	+		+	+			+	+			+		
Išpuini	+						+	+(5)					
Išpuini-Menua	+												
Išpuini-Menua- Inišpua								+(6)					
Menua				+							+		
Argišti II	+		+										
Ayanis	+		+		+				+	+			+
Rusa II	+(8)	+	+(3)		+				+	+(5)			+(2)
Argišti II	+	+											
Karmir-blur	+	+	+	+								+	+
Argišti I	+(8)	+(3)	+(2)	+								+	+
Sarduri II	+(3)	+(4)	+(3)	+(3)								+	+
Rusa I	+												
Sarduri III	+												
Toprakkale	+	+											
Rusa II	+	+(2)											
Rusa III	+(10)												
Aznavurtepe		+				+							
Išpuini		+(2)											
Menua						+							

Inscriptions on a helmet and a shield of Argišti father of Rusa from Ayanis are not complete. The shield must have been a votive, as every inscribed shield was. M. Salvini thinks that the helmet was votive too. (Personal communication, 2013).

Table 3a. Distribution of Inscribed Bronze Votive Objects By Rooms in Karmir-blur.

<i>KING</i>	<i>Room</i>	Rm 3	Rm 5	Rm 8	Rm 10	Rm 13	Rm 23	Rm 28	Rm 33	Rm 34	Rm 36	Rm 37	Rm 38	Rm A	Rm 53	Rm ?
	<i>Item</i>															
ARG I	Shield	+						+		+	+			+		
	Helmet						+	+				+				
	Quiver							+			+					
	Arrowh.										+					
	Armour										+					
	Disk															+
SDR II	Shield							+?	+				+	+		
	Helmet			+?	+		+									
	Quiver		+			+										+
	Arrowh.										+					
RS I	Shield							+								
SDR III	Shield														+	

Table 3b. Distribution of Inscribed Bronze Votive Objects By Rooms in Upper Anzaf.

<i>KING</i>	<i>Room</i>	Great Strm. 11	Room 9	Grand Rec. Hall	Room in Temple West Courtyard	Temple Courtyard
	<i>Item</i>					
İSPUINI	Sword Sheath		+			
	Votive Rings			+		
İSP-MEN	Shield				+	
İSP-MEN-İNŞ	Votive Rings				+	
MENVUA	Plaque (Shield Tag)	+				
	Arrowh.		+			
ARG II	Shield					+
	Quiver					+

Table 3c. Distribution of Inscribed Bronze Votive Objects By Rooms in Ayanis.

<i>KING</i>	<i>Room</i> <i>Item</i>	Entr Rm	Rm 1	Rm 2	Rm 3	Rm 4	Rm 5	Rm 6	Temple Courtyard	Monumental Gate
RUSA II	Shield	+				+			+	+
	Helmet					+			+	
	Quiver	+			+				+	
	Spear Head				+					
	Lance (Šuri)								+	
	Sikkatu	+							+	
	Disk								+	
ARG II	Shield					+				
	Helmet					+				

Table 4. Distribution of Finds by Rooms in Upper Anzaf.

Room in Temple West Courtyard		Room 9	
Name	Material	Name	Material
Plates (on a wooden gate)	Bronze	Arrowheads	Iron
Nails	Bronze	Arrowheads	Bronze
Knife	Iron	Sword Sheath	Bronze
Arrowheads	Iron	Sword Frag.	Iron
Arrowheads	Bronze	Horse Harness	Bronze
Fibula	Bronze		
Rings	Bronze		
Disks	Bronze		
Horse Harnesses	Bronze		
Bracelet	Bronze		
Shields	Bronze		
Shield Handles	Bronze		
Cheek Plates	Bronze		
Armour Pieces	Iron		

Table 5. Distribution of Finds by Rooms in Temple Area at Ayanis.**Entrance Room**

Name	Material	Quantity
Helmet	Bronze	6
Quiver	Bronze	10
Quiver	Iron	1
Shield	Bronze	4
Arrowhead	Bronze	12
Arrowhead	Iron	400
Spearhead	Iron	28
Cauldron	Bronze	1
Nail (Eagle Headed)	Iron	13
Nail (Sikkatu)	Bronze+Iron	1
Handle (Shield?)	Iron	1
Fibula	Bronze	1
Tool (Chisel?)	Stone	1
Tray	Bronze	1

Room 1

Name	Material	Quantity
Quiver	Bronze	11
Shield	Bronze	1
Arrowhead	Bronze	120
Arrowhead	Iron	125
Spearhead	Iron	28
Armlet	Bronze	3
Pin	Bronze	1
Decorated Plate Frag.	Bronze	4
Nail (Mushroom Headed)	Bronze+Iron	1
Nail (Mushroom Headed)	Iron	1
Rectangular Object (Altar?)	Bronze	1
Handle (Shield?)	Bronze	2
Rosette	Bronze	1
Object	Baked Clay	1

Room 2

Name	Material	Quantity
Shield	Bronze	3
Fibula	Bronze	1
Nail	Iron	1
Nail	Bronze	4
Decorated Plate Frag.	Bronze	2
Object (Scraper?)	Bronze	1

Room 3

Name	Material	Quantity
Quiver	Bronze	8
Shield	Bronze	1
Arrowhead	Iron	15
Spearhead	Bronze	1
Spearhead	Iron	13
Nail (Eagle Headed)	Iron	2

Room 4

Name	Material	Quantity
Helmet	Bronze	4
Quiver	Bronze	5
Shield	Bronze	6
Arrowhead	Bronze	10
Arrowhead	Iron	60
Spearhead	Iron	25
Nail (Eagle Headed)	Iron	3
Nail	Iron	2
Decorated Plate Frag.	Bronze	2
Bead	Agate Stone	1

Room 5

Name	Material	Quantity
Quiver	Bronze	1
Arrowhead	Iron	5
Spearhead	Iron	7
Decorated Plate Frag.	Bronze	1

Room 6

Name	Material	Quantity
Quiver	Bronze	4
Shield	Bronze	2
Spearhead	Iron	7
Arrowhead	Bronze	2
Arrowhead	Iron	45
Ring	Bronze	4
Object	Bronze	2

Table 6. Approximate distribution of weapons by rooms.

	Etrance Room	Room 1	Room 2	Room 3	Room 4	Room 5	Room 6
Helmet	6				4		
Quiver (Bronze)	10	11		8	5	1	4
Quiver (Iron)	1						
Shield	4	1	3	1	6		2
Arrowheads (Bronze)	12	120			10		2
Arrowheads (Iron)	400	125		15	60	5	45
Spearheads (Bronze)				1			
Spearheads (Iron)	28	15		13	25	7	

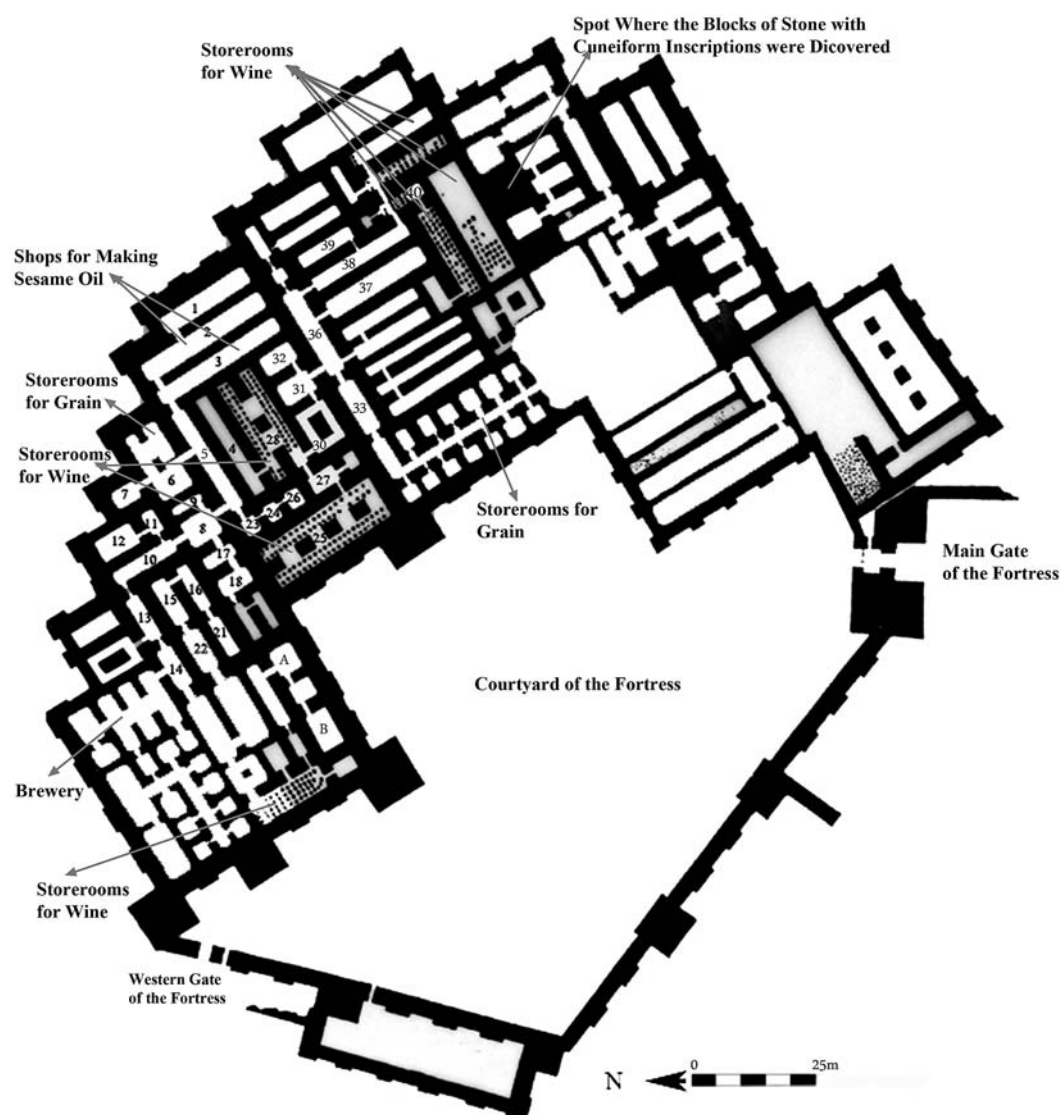


Fig. 1. Architectural plan (Master plan after Piotrovskii 1965, p. 73, fig. 29;
Room numbers after Oganessian 1955, p. 8, fig. 1).

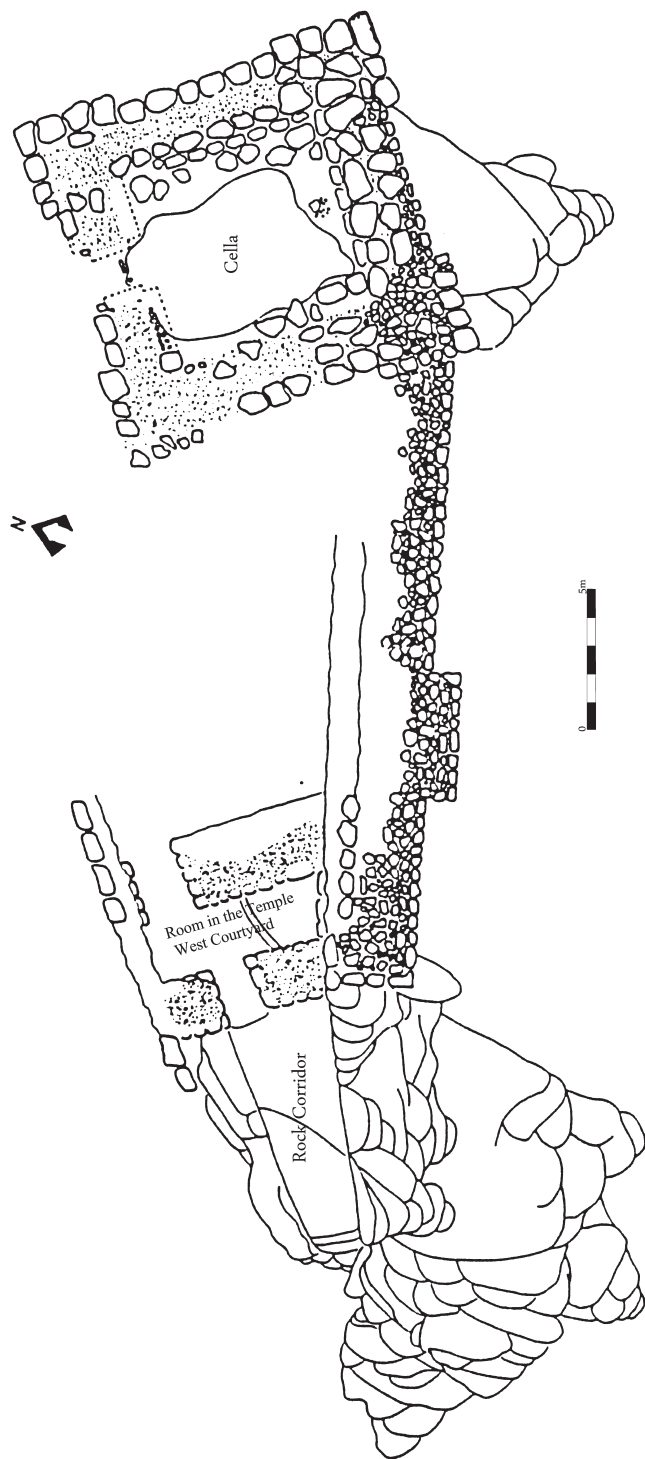


Fig 2. Temple and related structures (after Dinçol and Dinçol 1995, p. 43, pl.5).

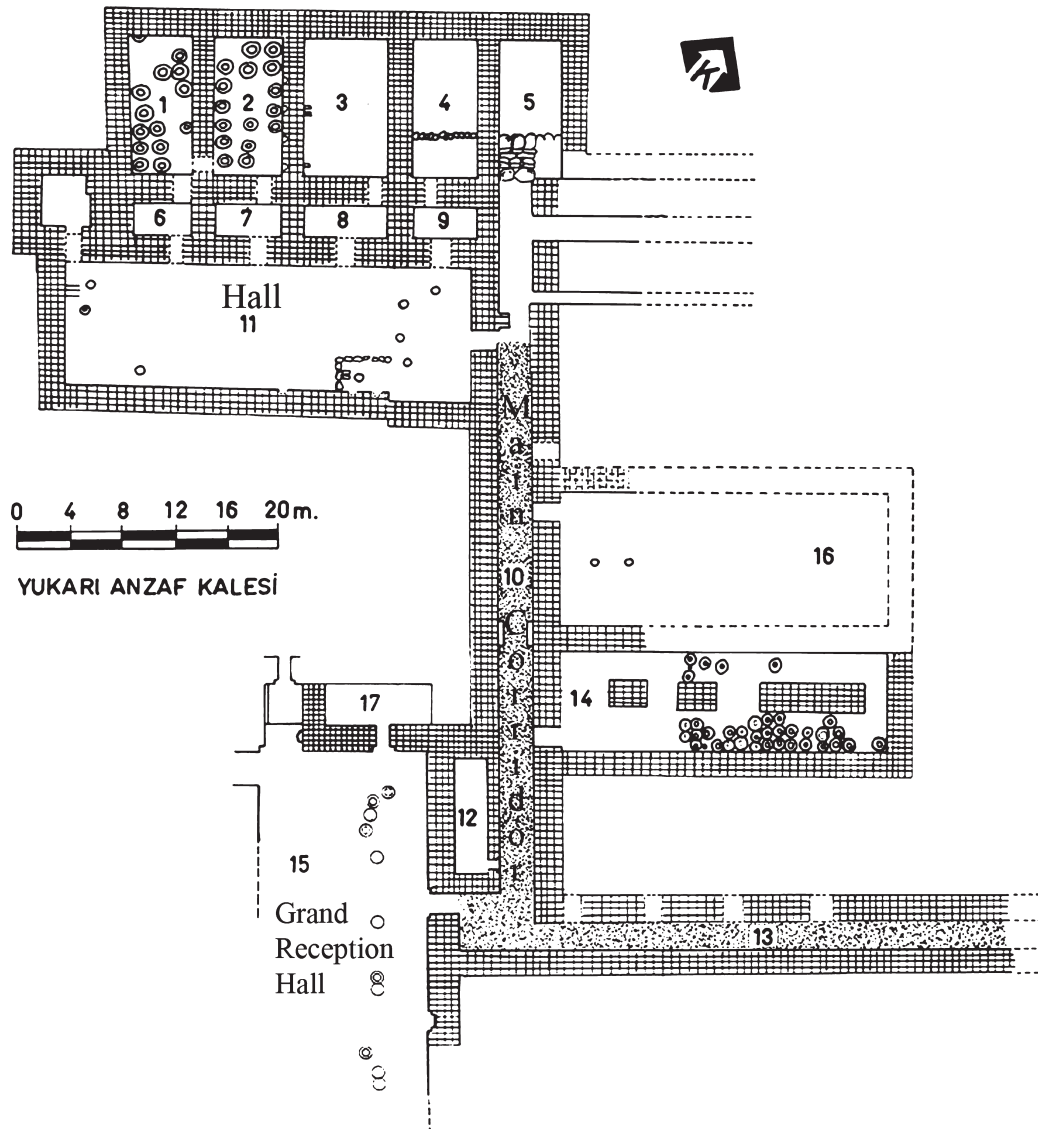


Fig. 3. A general overview of northern structures (after Belli *et al.* 2009, p. 113, drawing 2).

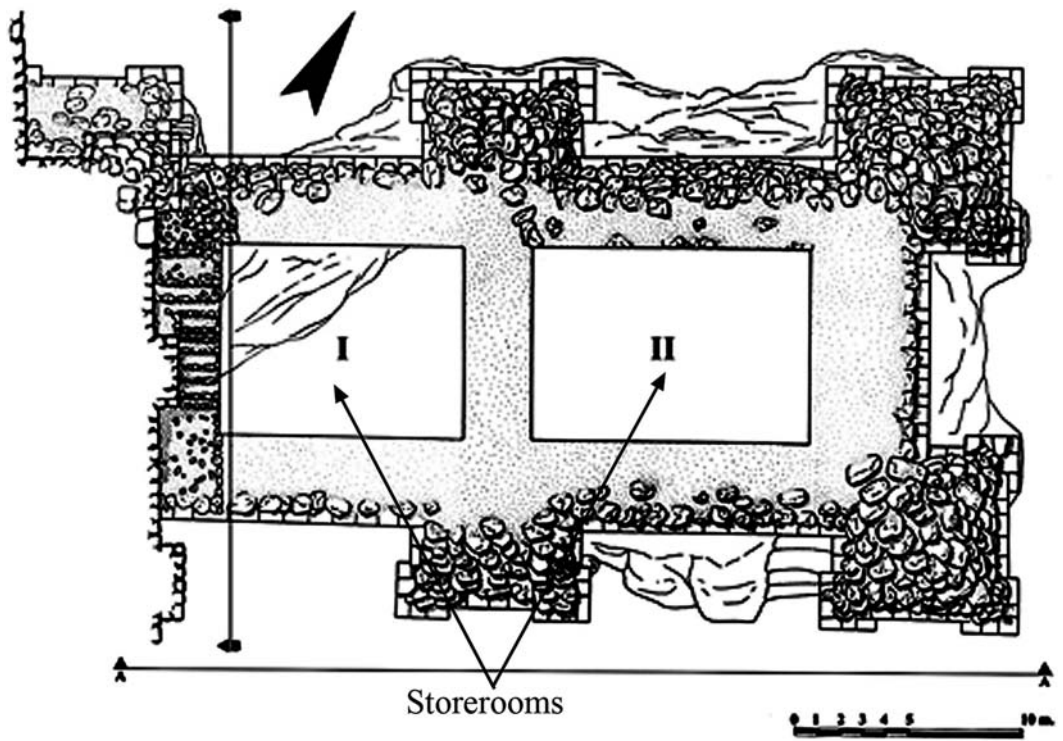


Fig. 4. Plan of "Uç Kale" (after Tarhan 2005, p. 132, pic. 5).

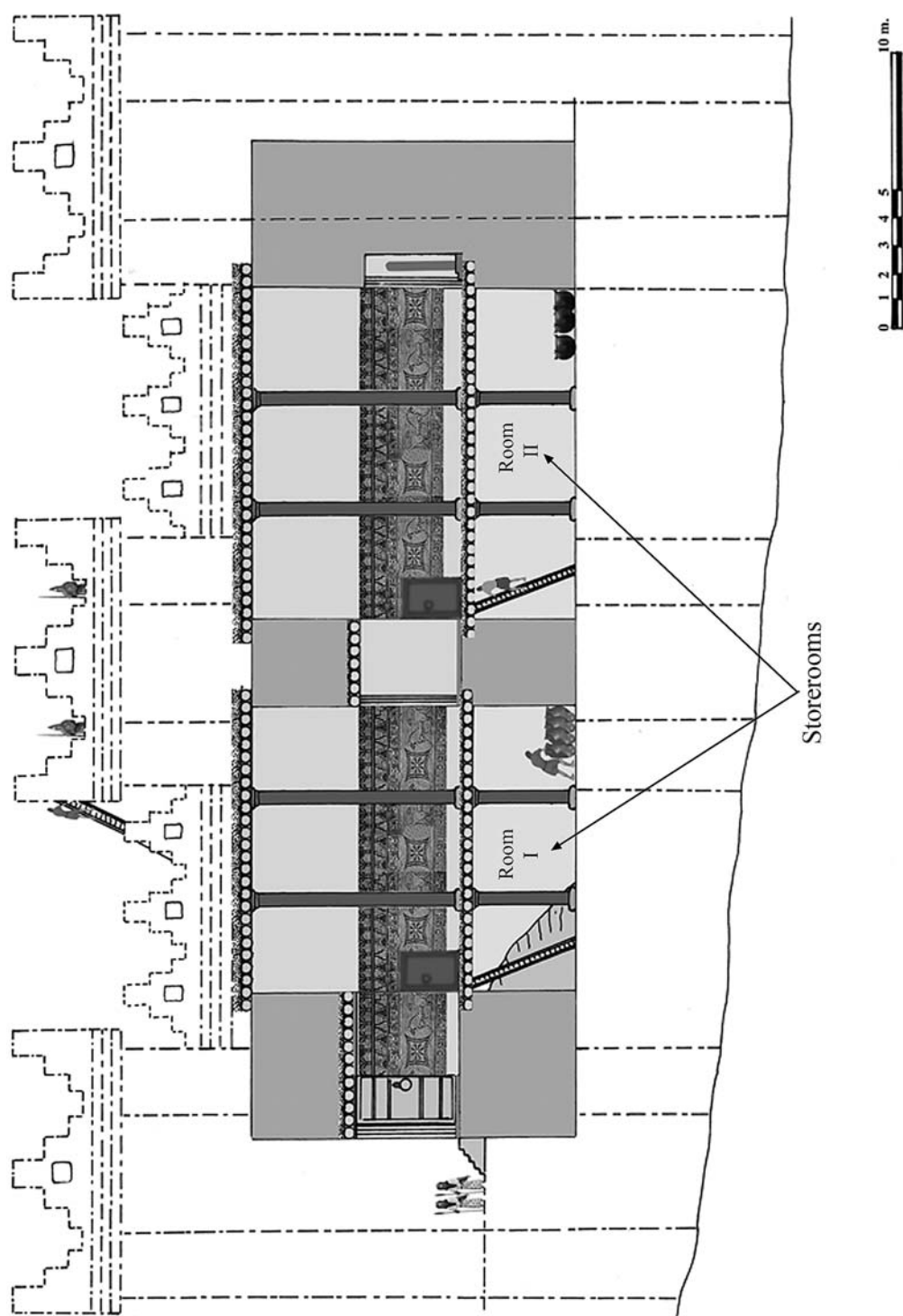


Fig. 5. Resitution of "Uç Kale" (after Tarhan 2005, p. 136, pic. 9).

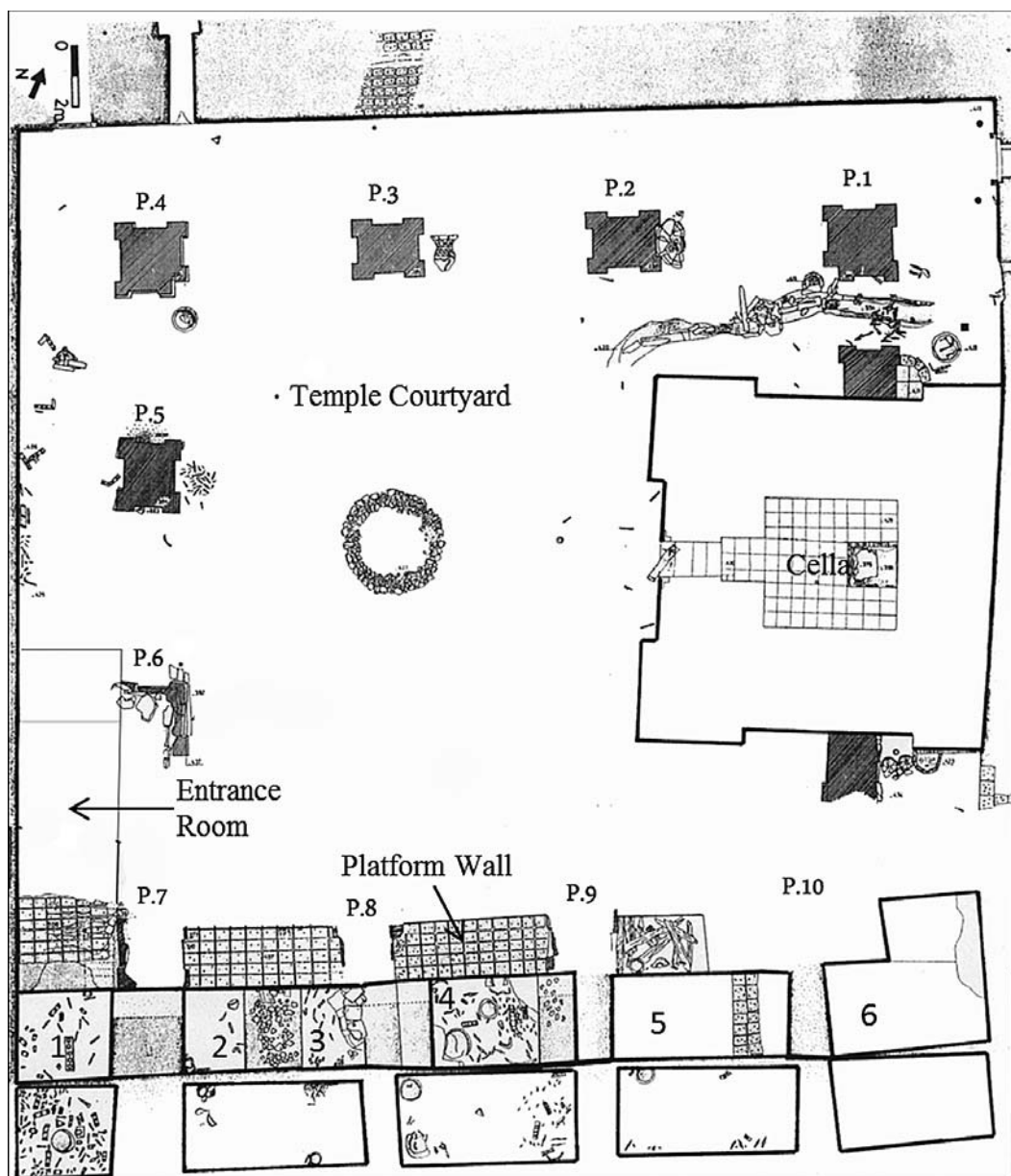


Fig. 6. Temple area (after Çilingiroğlu 2005, fig. 2).



Fig. 7a. An example indicating the depth of storerooms in the temple area
(Ayanis excavation archive, by permission of A. Çilingiroğlu).

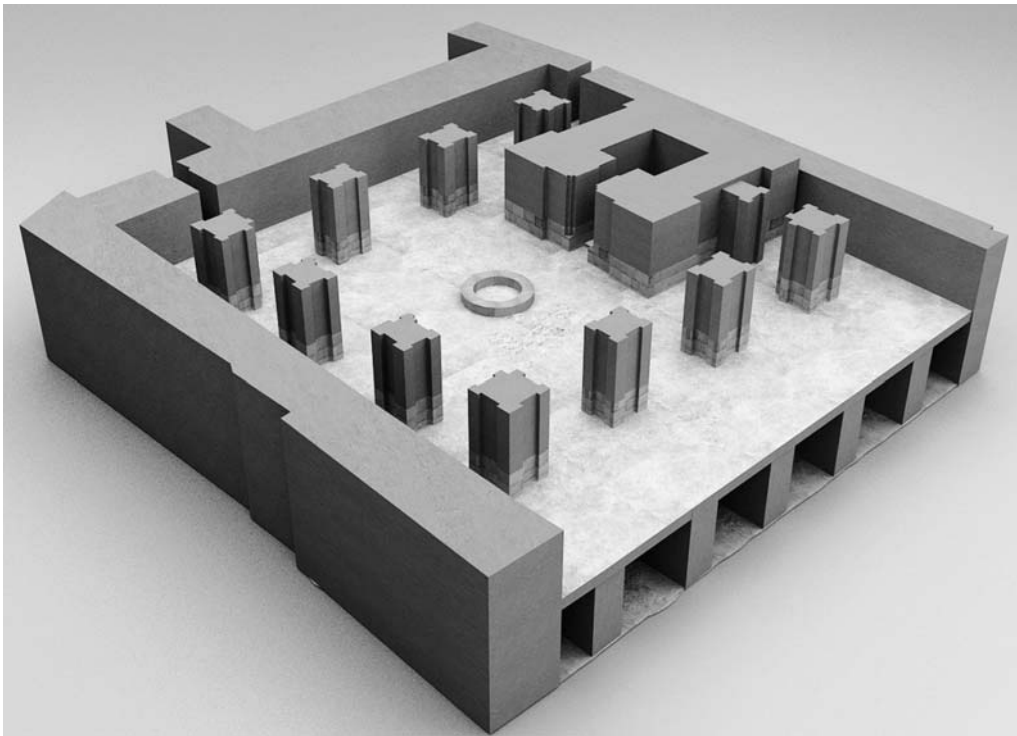


Fig. 7b. 3D reconstruction of storerooms in temple area.



Fig. 8. Location of storerooms in the temple area.

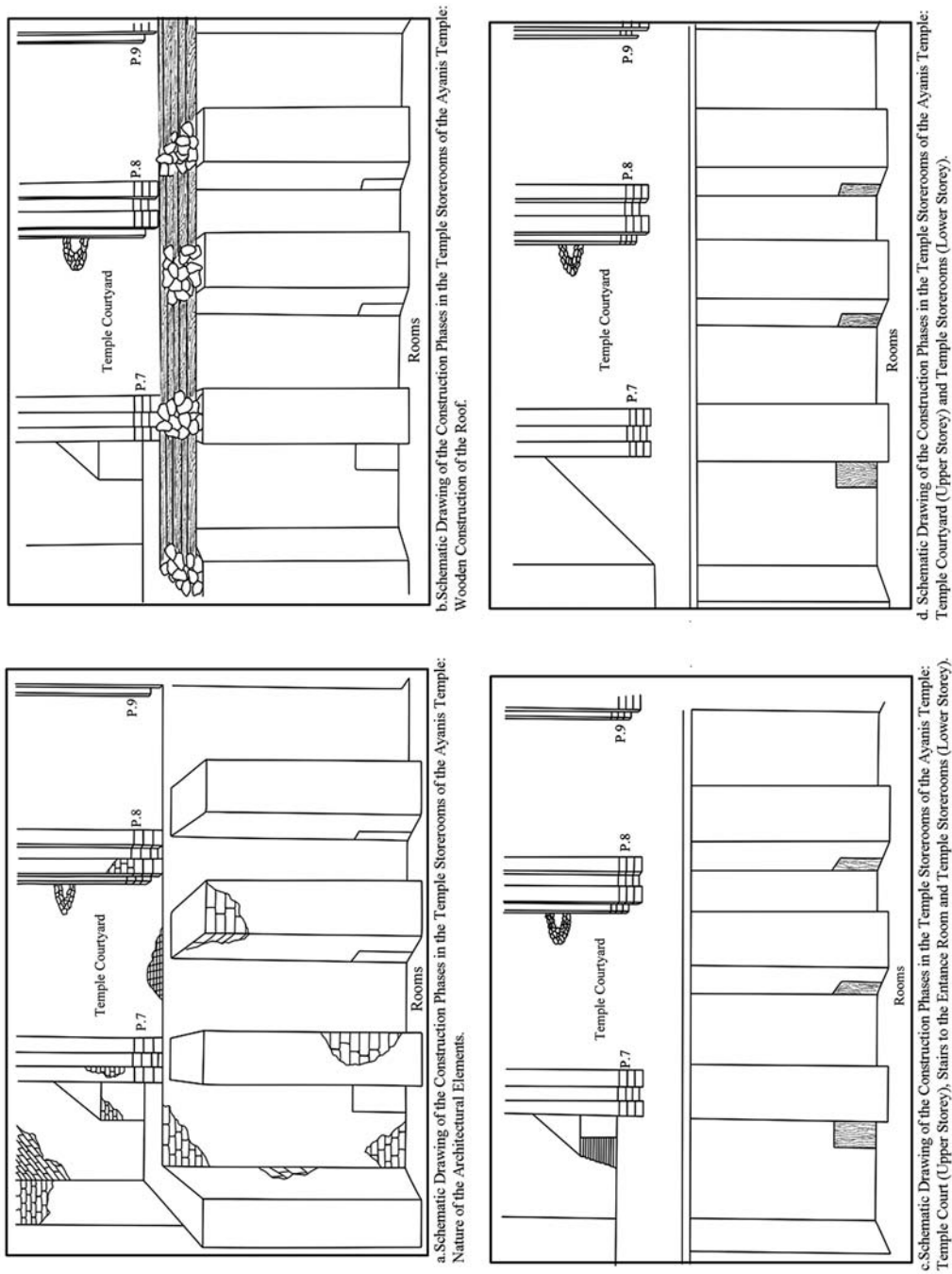


Fig. 9. Schematic drawing of the construction phases of the temple storerooms.

- a. Nature of the architectural elements; b. Wooden construction of the roof; c. Temple courtyard (upper storey), stairs to the Entrance Room; and the temple storerooms (lower storey); d. Temple courtyard (upper storey) and the temple storerooms (lower storey).



Fig. 10. West line of the temple courtyard and bronze cauldron on the second floor in the Entrance Room (Ayanis excavation archive, by permission of A. Çilingiroğlu).



Fig. 11. Position of tin-coated bronze shield in Room 4 during excavation (Ayanis excavation archive, by permission of A. Çilingiroğlu).



Fig. 12. An example of thick common walls of the rooms and the stones belonging to the roof construction (Ayanis excavation archive, by permission of A. Çilingiroğlu).



Fig. 13. Staircase and status of the bedrock in the Entrance Room (Ayanis excavation archive, by permission of A. Çilingiroğlu).



Fig. 14. Adaptation of stone foundation of the building to the bedrock
(Ayanis excavation archive, by permission of A. Çilingiroğlu).

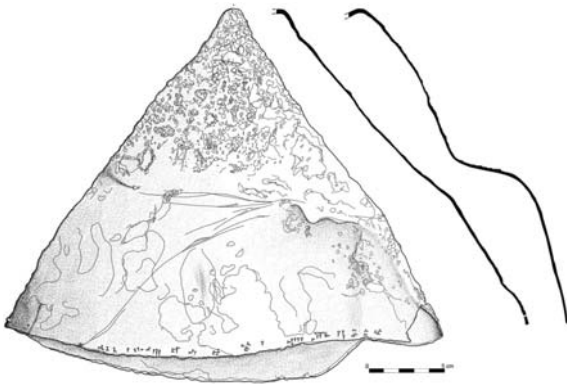


Fig. 15. Tin-coated bronze helmet dedicated to the god Haldi by Argišti son of Rusa (I),
found in Room 4 (Ayanis excavation archive, by permission of A. Çilingiroğlu).

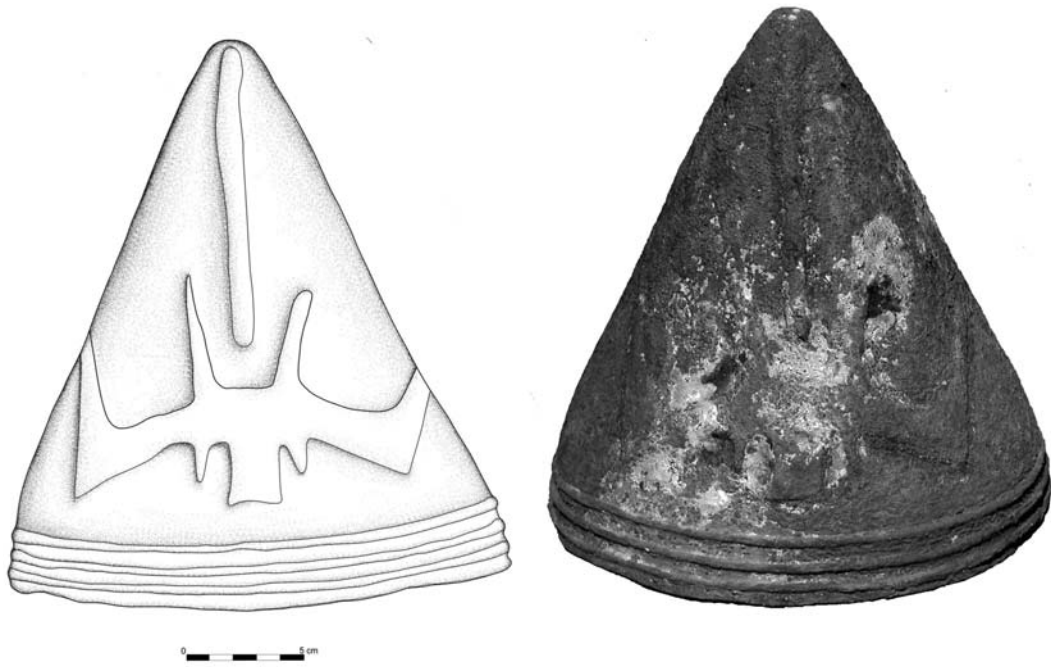


Fig. 16. A bronze helmet unearthed in the Entrance Room
(Ayanis excavation archive, by permission of A. Çilingiroğlu).

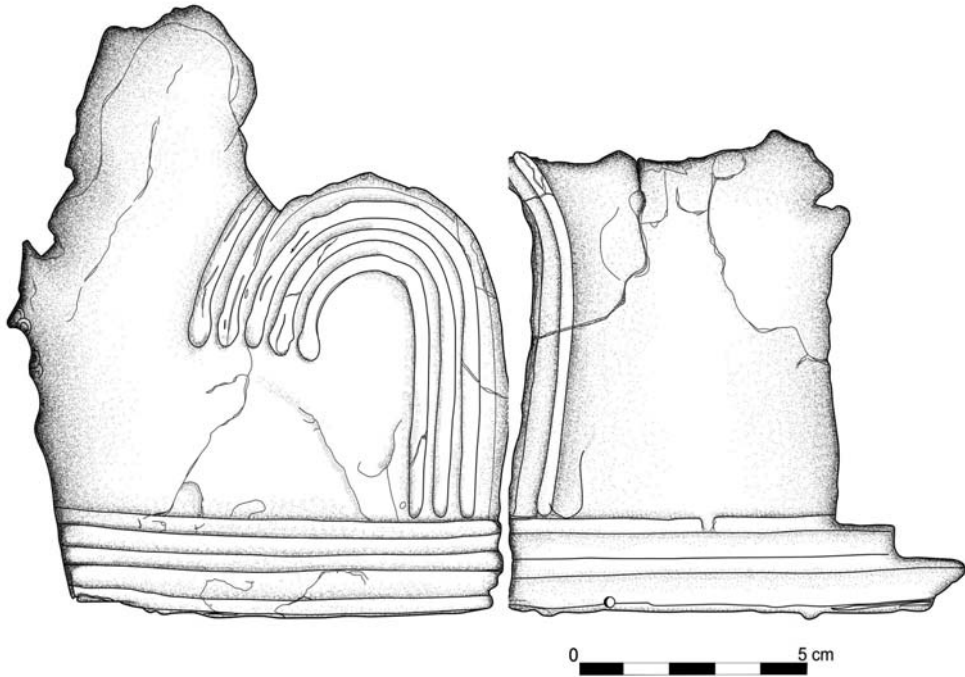


Fig. 17. Helmet fragments in Room 4 carried relief crooks terminating in snakes' heads (Ayanis excavation archive, by permission of A. Çilingiroğlu).



Fig. 18. Shield, damaged due to severe fire in the Entrance Room
(Ayanis excavation archive, by permission of A. Çilingiroğlu).



Fig. 19. A plain conical bronze shield
(Ayanis excavation archive, by permission of A. Çilingiroğlu).

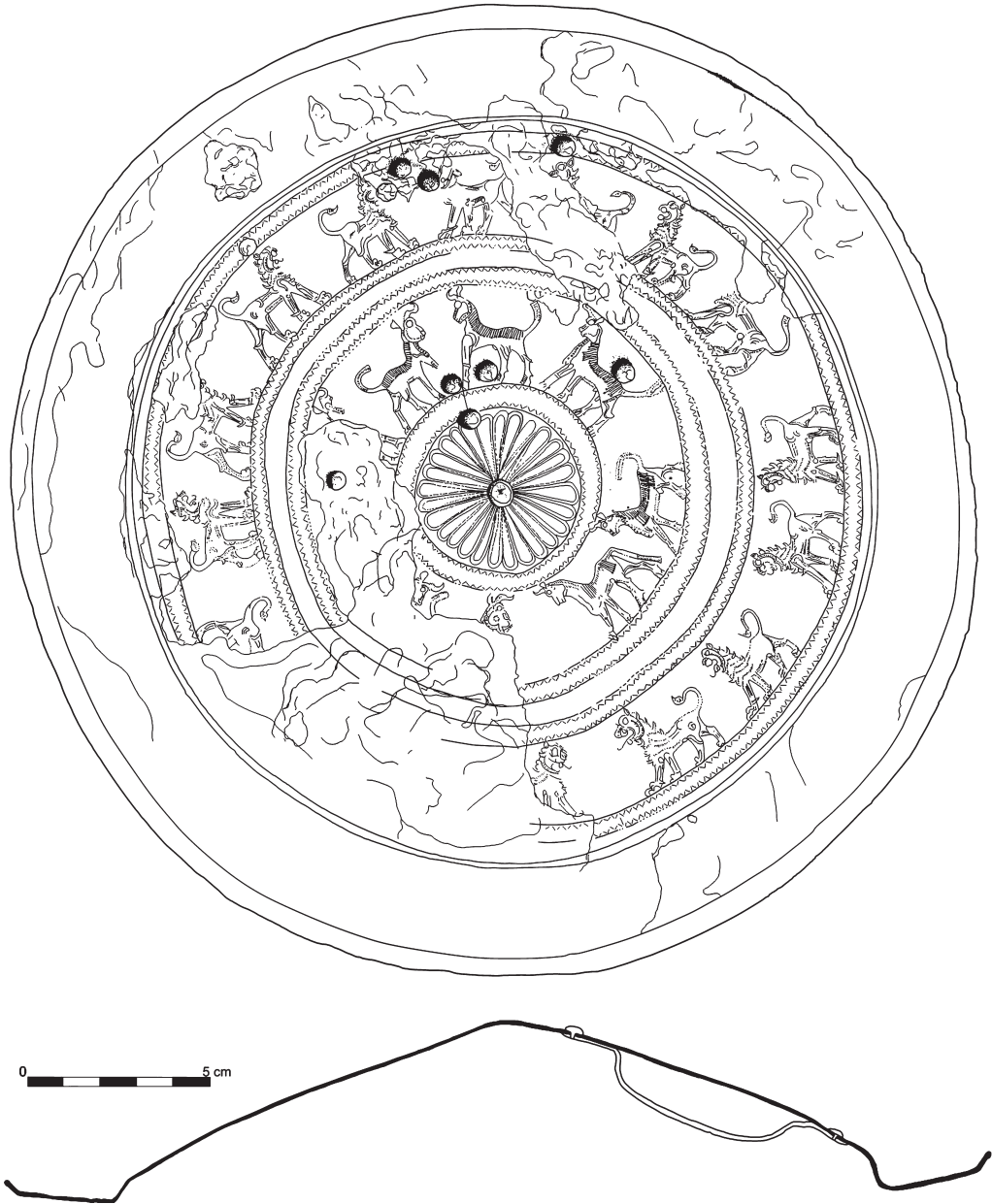


Fig. 20. Drawing of the tin-plated bronze shield from Room 4 (Ayanis excavation archive, by permission of A. Çilingiroğlu).



Fig. 21. Picture of the tin-plated bronze shield from Room 4 (Ayanis excavation archive, by permission of A. Çilingiroğlu).

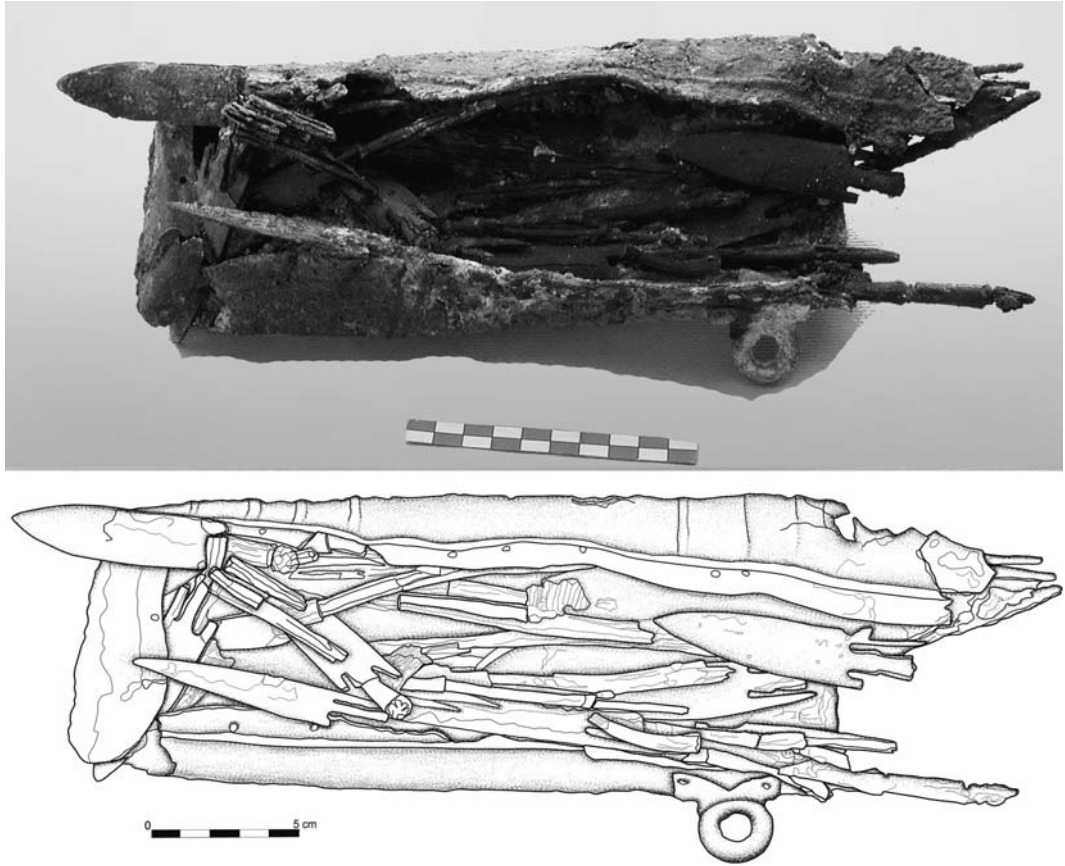


Fig. 22. A bronze quiver remnant containing barbed solid tanged leaf-shaped bronze arrowheads (Ayanis excavation archive, by permission of A. Çilingiroğlu).

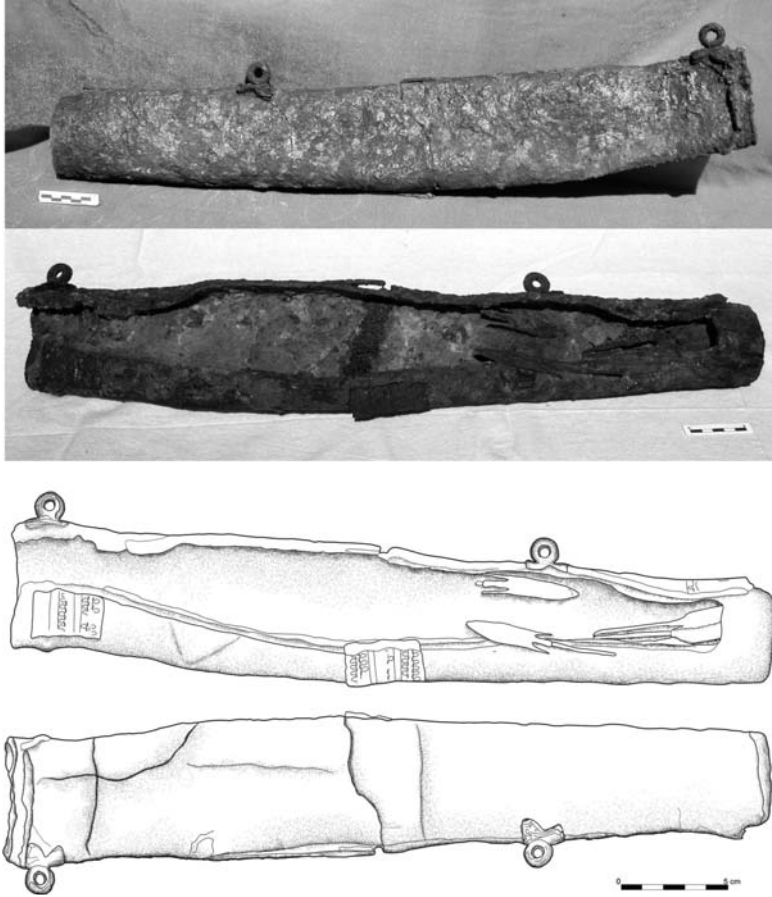


Fig. 23. Iron quiver with bronze arrowheads unearthed in the Entrance Room (Ayanis excavation archive, by permission of A. Çilingiroğlu).



Fig. 24. Different size of iron spearheads (Ayanis excavation archive, by permission of A. Çilingiroğlu).



Fig. 25. Various size and type of iron arrowheads (Ayanis excavation archive, by permission of A. Çilingiroğlu).



Fig. 26. Solid tanged leaf-shaped arrowheads with two short-barbed bronze arrowheads (Ayanis excavation archive, by permission of A. Çilingiroğlu).

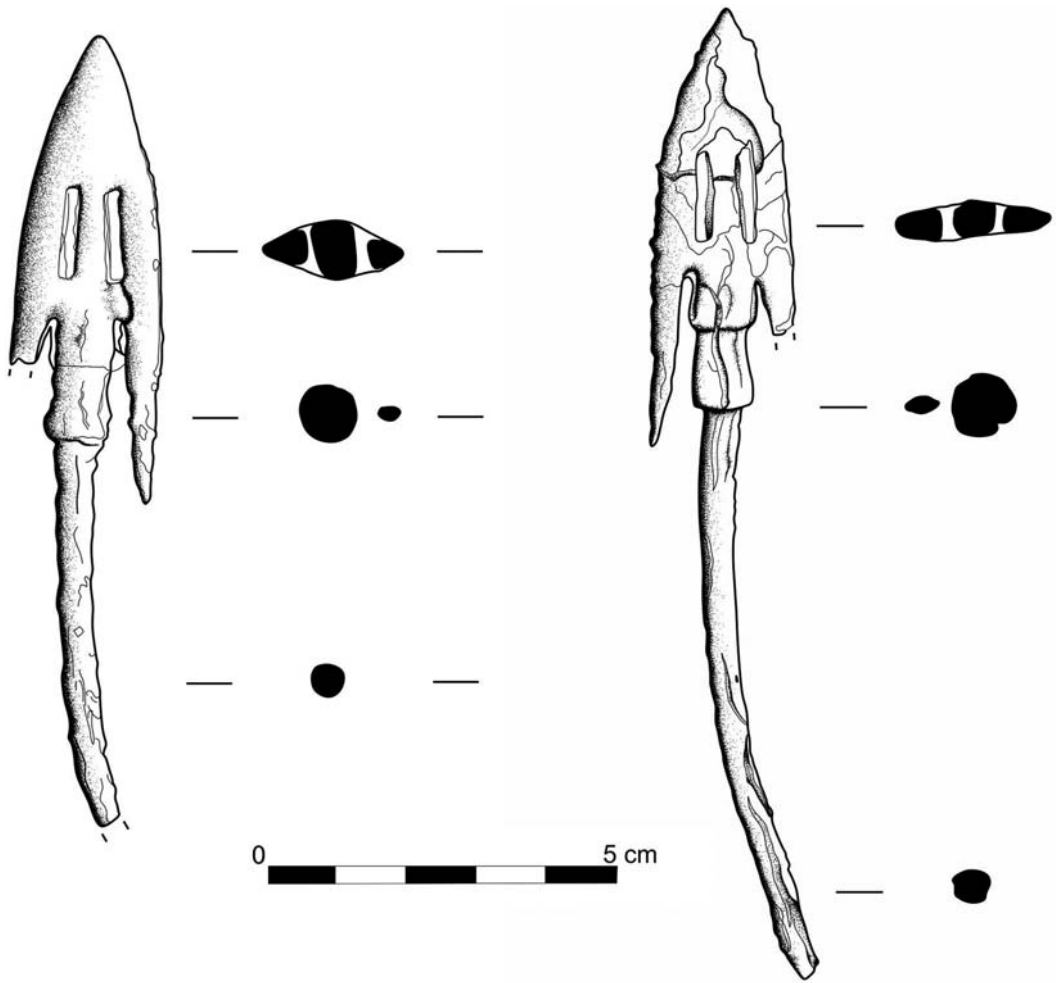


Fig. 27. Solid tanged leaf-shaped with two short barbed and two holed bronze arrowheads (Ayanis excavation archive, by permission of A. Çilingiroğlu).



Fig. 28. Small iron and bigger eagle-headed nails (Ayanis excavation archive, by permission of A. Çilingiroğlu).

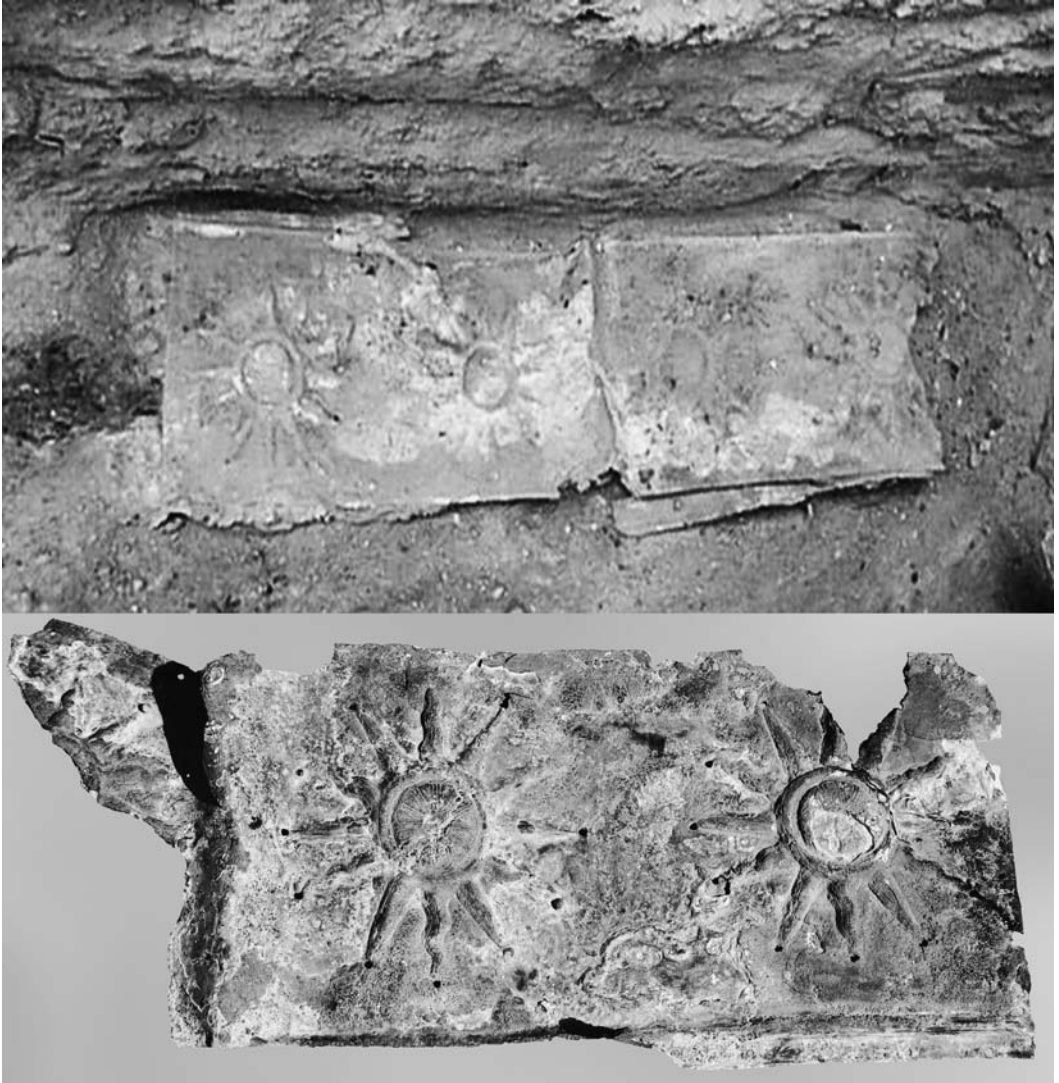


Fig. 29. Bronze plate with repoussé sun motif (Ayanis excavation archive, by permission of A. Çilingiroğlu).

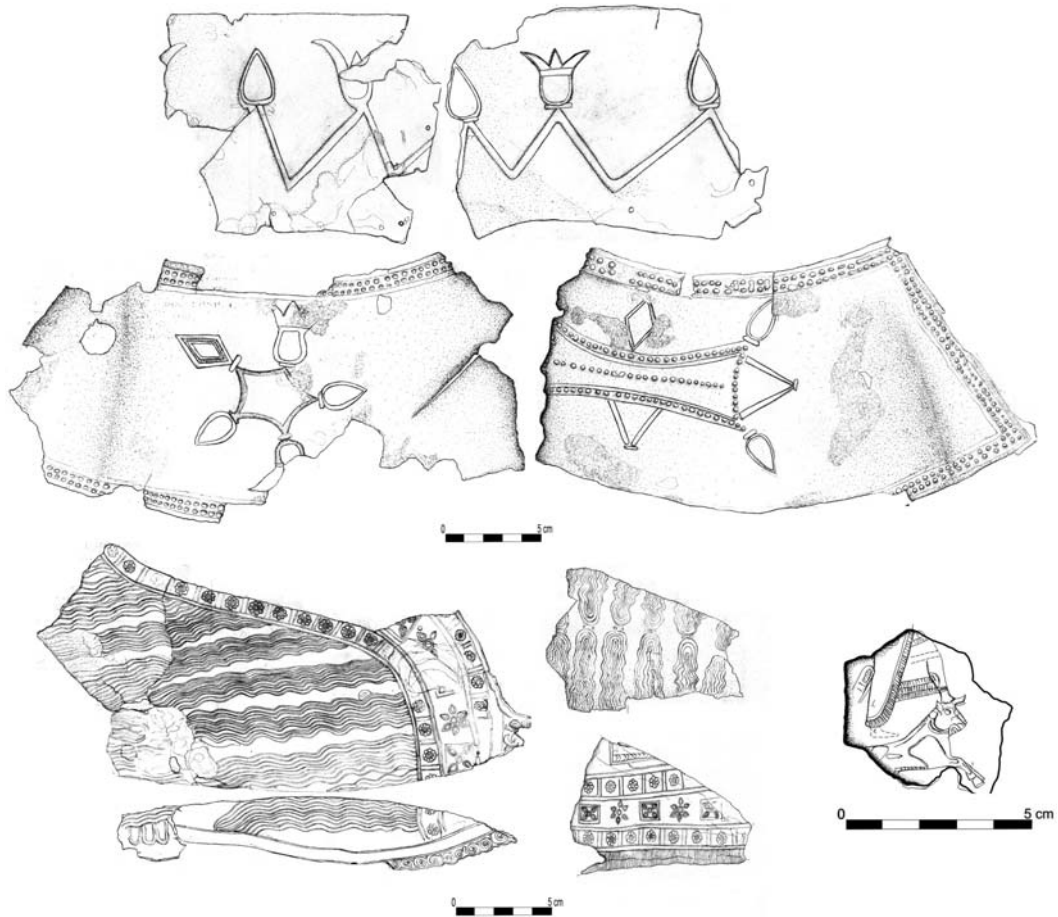


Fig. 30. Drawing of various ornated bronze plates (Ayanis excavation archive, by permission of A. Çilingiroğlu).



Fig. 31. Examples of decorated bronze plates
(Ayanis excavation archive, by permission of A. Çilingiroğlu).



Fig. 32. Two jars standing on the first floor of the Entrance Room
(Ayanis excavation archive, by permission of A. Çilingiroğlu).



Fig. 33. Shield which served as a lid of one of the jars located in the first floor of the Entrance Room
(Ayanis excavation archive, by permission of A. Çilingiroğlu).



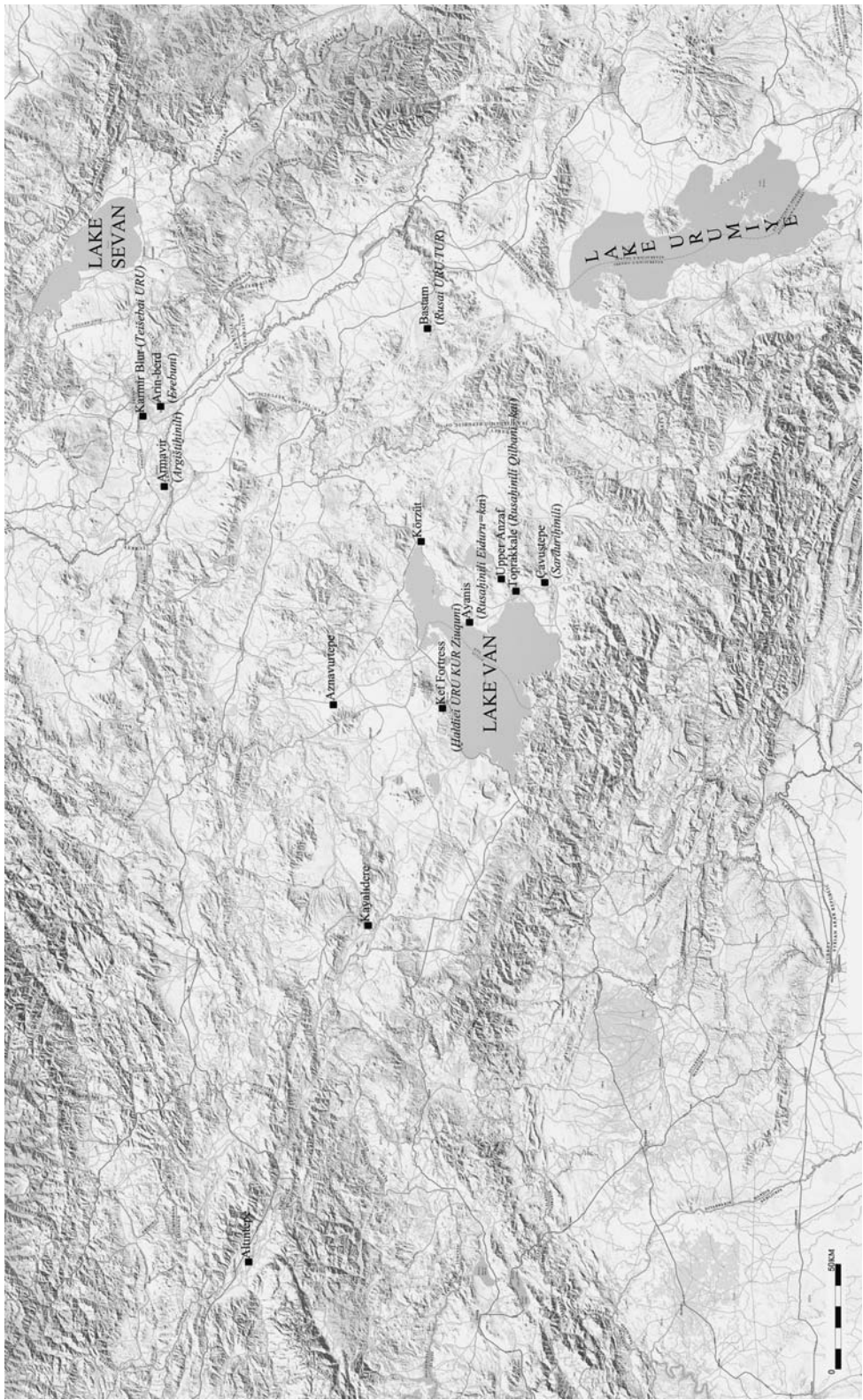
Fig. 34. Tray which served as a lid on one of the jars located in the first floor of the Entrance Room (Ayanis excavation archive, by permission of A. Çilingiroğlu).



Fig. 35. Bronze cauldron full of carbonised millet in the second floor of the Entrance Room (Ayanis excavation archive, by permission of A. Çilingiroğlu).



Fig. 36. A line mentioned *adunusini* building in the inscription of Ayanis temple's corridor (Ayanis excavation archive, by permission of A. Çilingiroğlu).



Map: Urartian territory. Fortresses referred to in the text.

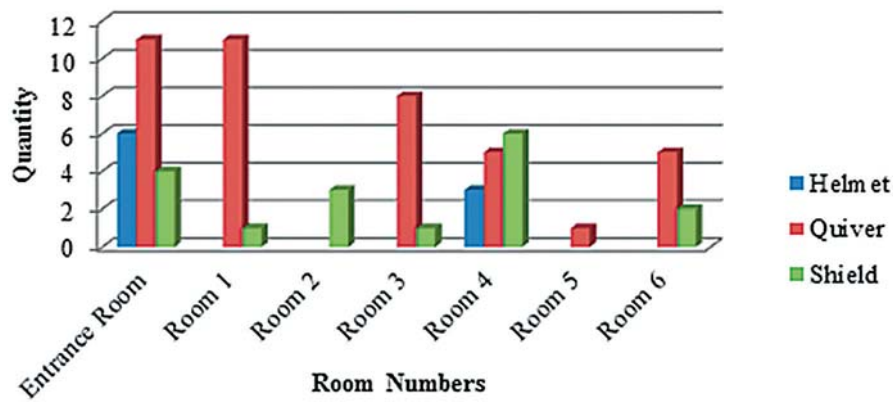


Fig. 37. Approximate distribution of the helmets, quivers and shields by rooms.

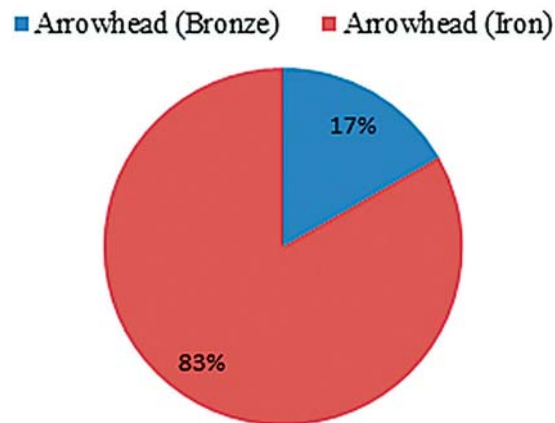


Fig. 38. Bronze/iron arrowheads ratio.

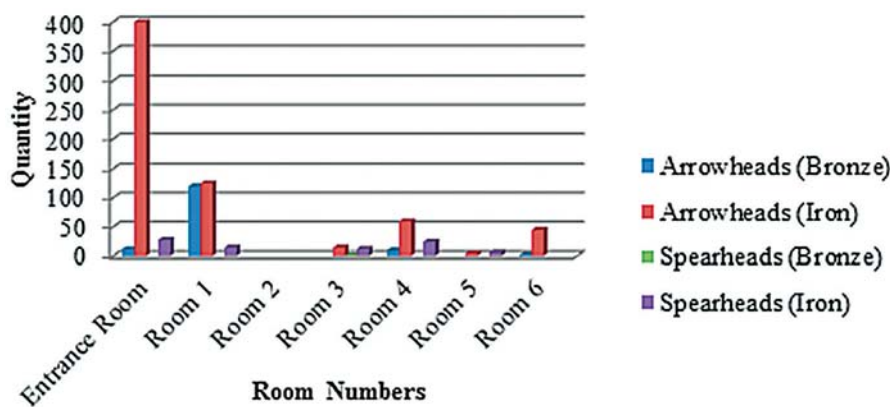


Fig. 39. Approximate distribution of the projectile points by rooms.

A Newly Discovered Iron Age Site at Sarrez, Iranian Kurdistan

Sheler AMELIRAD and Abbas RAZMPOUSH

Abstract

*Sarrez is an ancient site in Kurdistan Province, Iran, near the present-day country town of Kamyaran. This site was discovered accidentally during dam construction activities. It has yielded some metal artefacts, potsherds and bones that are comparable to Iron Age III instances. The collection in its entirety is discussed in this article. One of the main objects from Sarrez is a decorated beaker with a scene on its wall that is comparable in many ways to examples of Neo-Assyrian art. The purpose of this paper is to publish and date the metal objects of the Sarrez collection based on this bronze beaker, which is one the few beakers from western Iran which has been found in a secure context.**

The archaeological site of Sarrez is located some 50 km northwest of the present-day country town of Kamyaran, about 70 km from the city of Sanandaj, and 40 km from the Iraqi border. The site sits on the summit of the Kora mountain, very close to the village of Sarrez (Fig. 1).

In September 2011, as a result of dam construction activities, a number of artefacts, layers of ash, bones and a large quantity of potsherds were recovered from the site. These items could have belonged to a burial. The artefacts included four bronze vessels, a decorated bronze bracelet, two possible anklets, and two iron spearheads, which are now held in the Sanandaj Museum.

Description of the goods

Bronze Bracelet:

There is only one, circular bracelet amongst the Sarrez collection, which is of round section with open terminals. Both ends are decorated with narrowly carved geometric designs (Fig. 2a).

* The authors appreciate the cooperation and help of the Kurdistan Cultural Heritage Organization (Mr. Kyani, Mr. Azarshab and Eghbal Azizai) and Sanandaj Museum (Anvar Karimi).

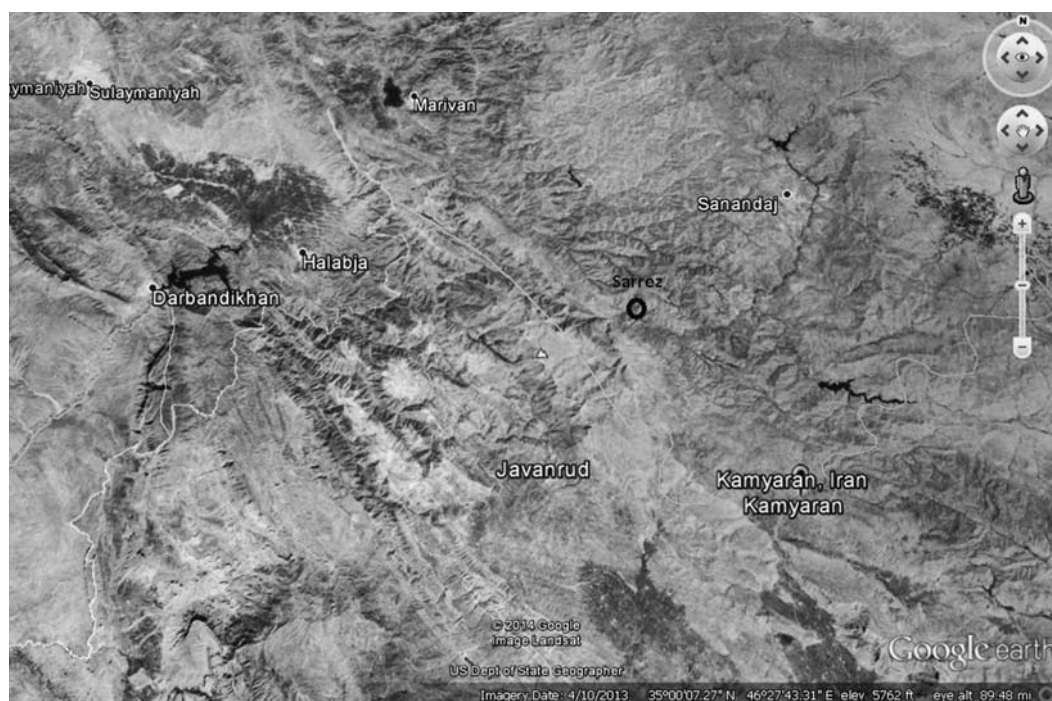


Fig. 1. Location of the Sarrez near Kamyaran (Google Earth; photographs of 2011).

Possible Bronze Anklets:

Two were discovered at the site. One is round in section and has straight terminals with punctures; it has spiral twisting. The best parallels to this type of bracelet are those discovered in Bard-I Bal, Marlik Tepe and Surkh-I Dum Luri (Fig. 2b).¹ The other anklet is open, with a plain section, and the flat-ended terminals are deeply incised with geometric patterns. Furthermore, the middle part of the anklet bears symmetric geometric designs. This form, with zoomorphic terminals, was common in the Iron Age III period (Fig. 2c).

Spearheads:

Two iron spearheads were discovered, different in size and shape. One, measuring 42 cm in length and 3.5 cm in width, is a long and slim-bladed spearhead with lozenge, and has a midrib and a long circular shaft (Fig. 3). The other spearhead measures 34 cm in length and almost 6 cm in width. It is wide-bladed, with a lozenge-shaped midrib in section and a long circular shaft. The iron spearheads are very significant in the Iron Age III (Fig. 3).

¹ Overlaet 2003, 66-3 and 66-4, pl. 202 (Bard-I Bal); Neghaban 1996, p. 168, pl. 82 (Marlik Tepe); Schmidt *et al.* 1989, p. 263, pl. 162n (Surkh-I Dum Luri).

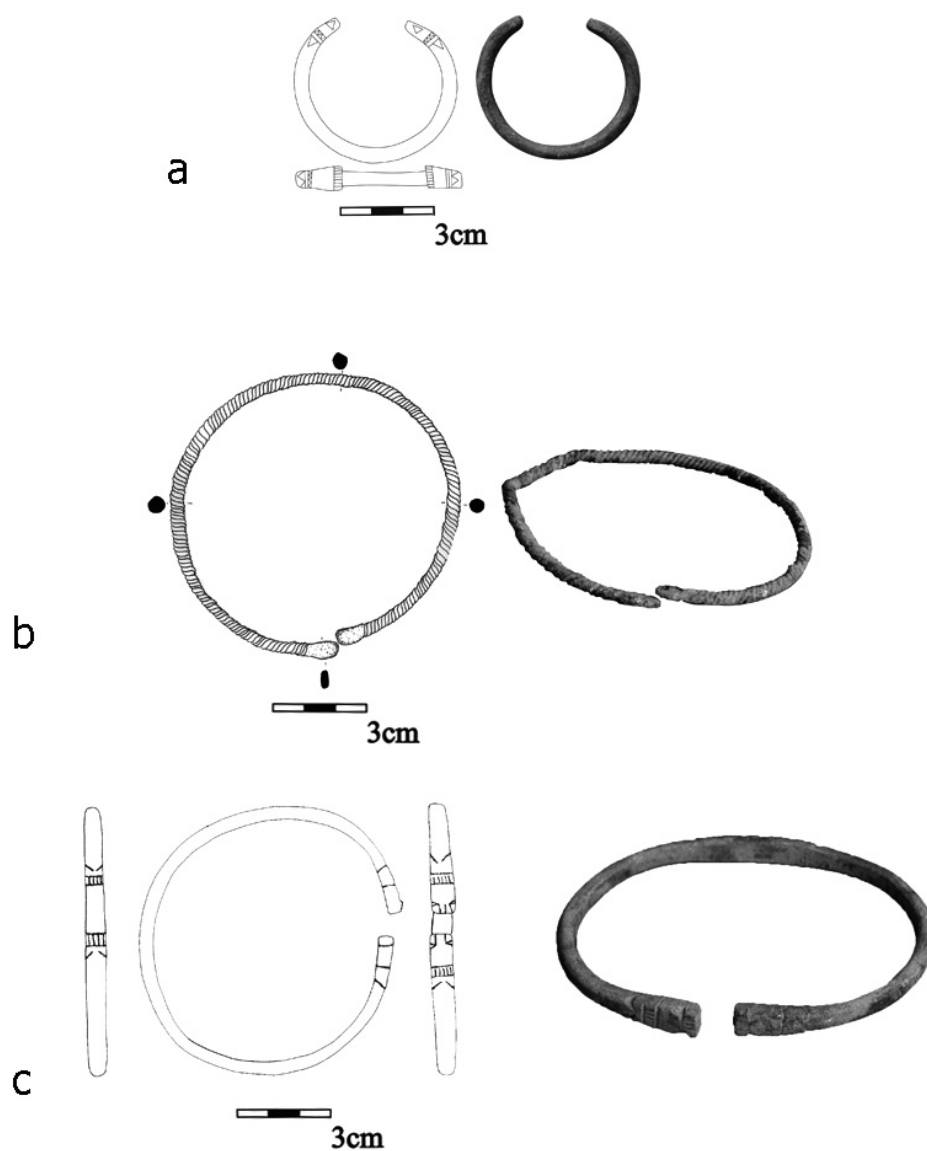


Fig. 2. bracelet (a) and anklets from Sarrez (b-c) (drawings and photographs by S. Amelirad).

Vessels:

Four bronze vessels were discovered at the site. Three are remarkably comparable to the vessels discovered in the Zagros Graveyard in Sanandaj, some 80 km northeast of Sarrez. The other bronze vessel is a decorated beaker.

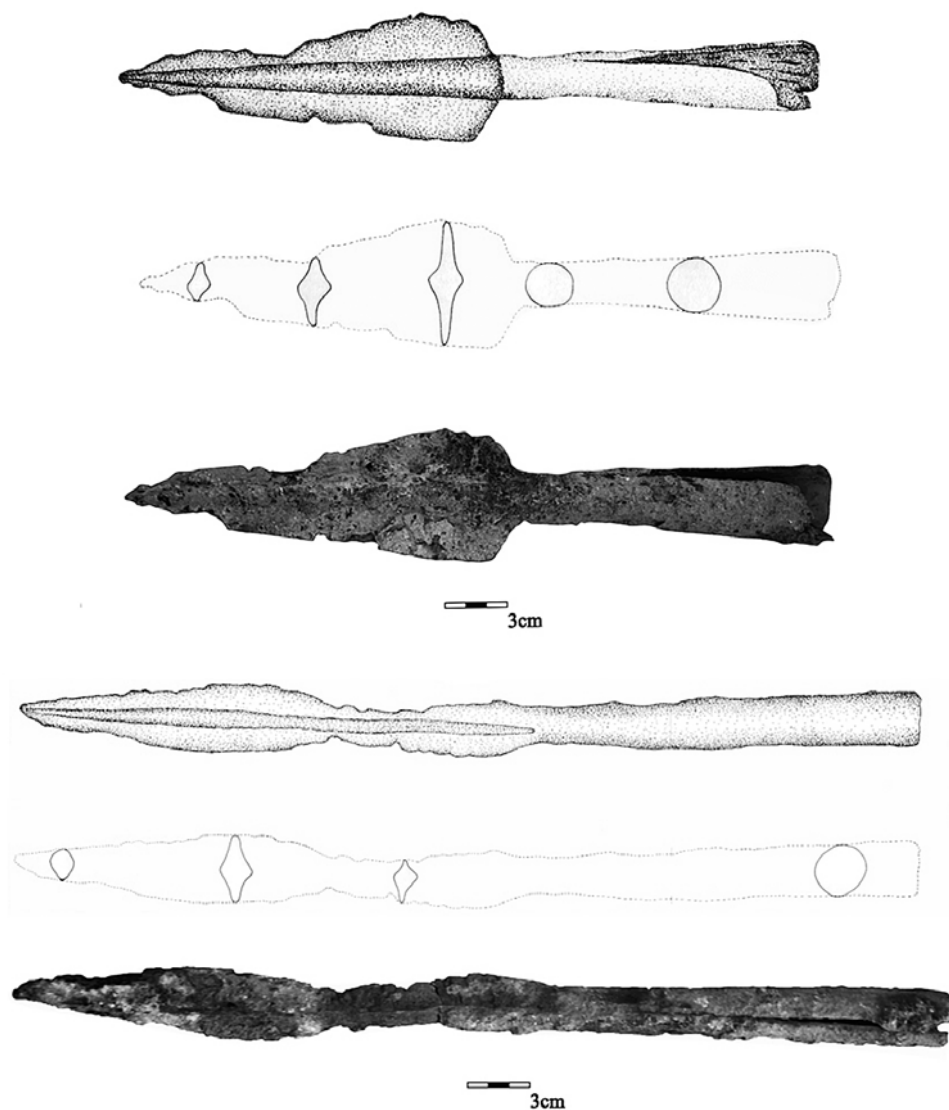


Fig. 3. Iron spearhead from the Sarrez (drawings and photographs by S. Amelirad).

No. 1: A bowl decorated over almost its entire surface with overlapping punched petals of varying size: large in the upper row and becoming smaller in the rows below. A vessel from the Iron Age III graveyard of Djub-i Gauhar in Pusht-i Kuh, belongs to the same type (Fig. 4a).²

² Haerinck and Overlaet 1999, pp. 30–31, ill. 15 no. 3, pl. 25, 76b; Amelirad *et al.* 2012, pp. 41–99, pl. 34.

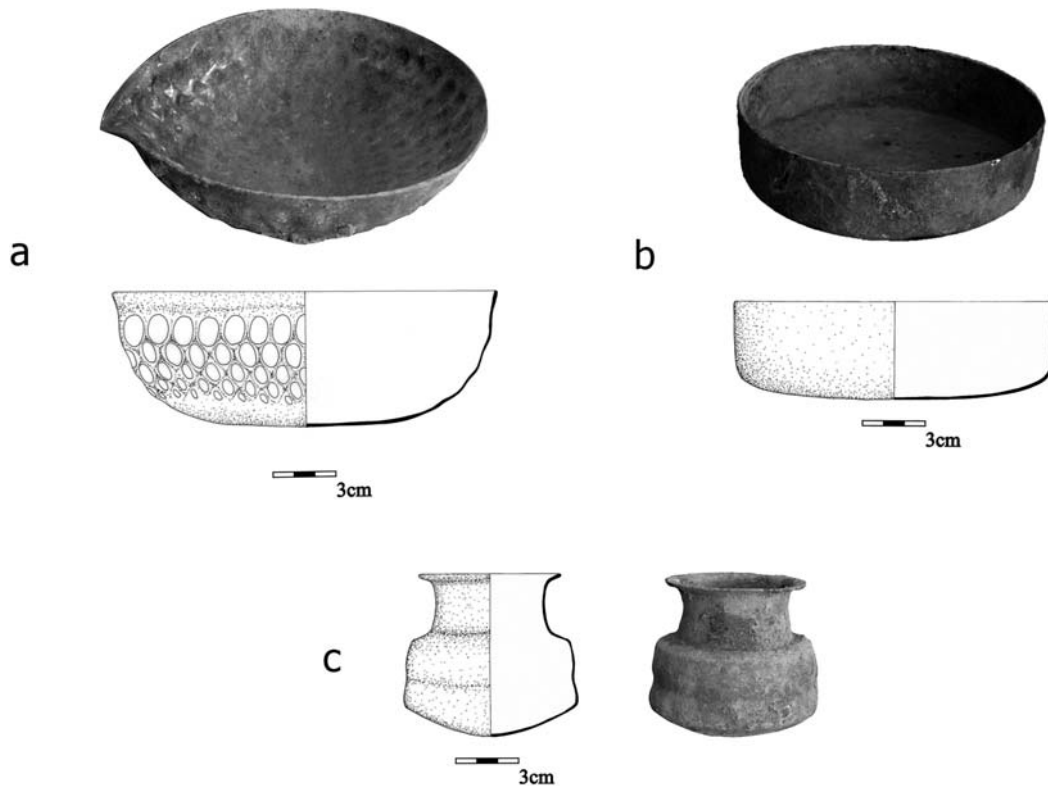


Fig. 4. Bronze vessels from Sarrez (drawings and photographs by S. Amelirad).

No. 2: A circular shallow and plain bronze bowl with flattened rim and a flat base. This type was common in the Iron Age and can be compared to bowls from Pusht-i Kuh, Luristan in War Kabudnb, Djub-i Gauhar, and Zagros Graveyard (Fig. 4b).³

No. 3: A simple sheet bronze jar, a so-called inkpot/ink-well vessel with slightly everted rim, and a concave tall neck with inclined shoulders. This type was common in the Iron Age III: from Uruk in the Neo-Babylonian period,⁴ at Susa in a Neo-Elamite context, in Luristan (e.g., seven examples at War Kabud⁵; five examples at Chamazhi Mumah⁶; two examples at Djub-i Gauhar⁷), and in Kurdistan, one example at the Zagros Graveyard (Fig. 4c).⁸

³ Haerinck and Overlaet 2004, pl. 138: A37- 4 (War Kabudnb); Haerinck and Overlaet 1999, ill. 15 no. 7, pl. 33, 77b (Djub-i Gauhar); Amelirad *et al.* 2012, pp. 41-99, pl. 34 (Zagros Graveyard).

⁴ Pedde 1992, p. 22 Taf. 22, 25.

⁵ Haerinck and Overlaet 1998, p. 61, fig. 20-13, pl. 142-143.

⁶ Haerinck and Overlaet 1998, p. 28, pl. 64.

⁷ Haerinck and Overlaet 1999, pp. 30-31, ill. 15: 10-11, pl. 78.

⁸ Amelirad *et al.* 2012, pp. 41-99, pl. 34.

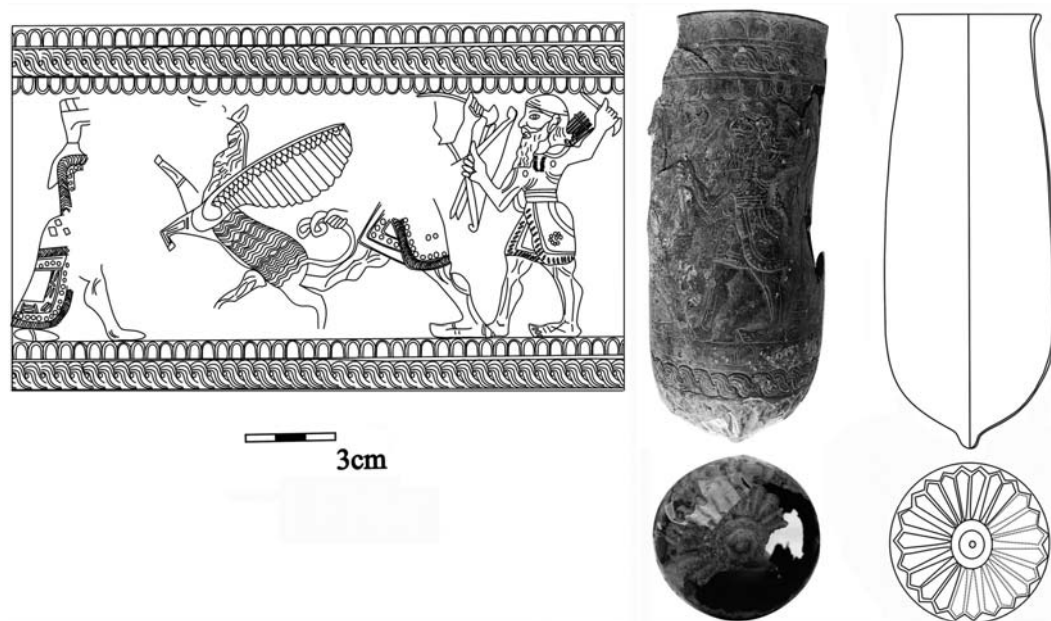


Fig. 5. Decorate bronze beaker from Sarrez (drawings and photographs by S. Amelirad).

No 4: This vessel is a situla or, according to Muscarella, a beaker (Fig. 5).⁹ The vessel is damaged. Its height is 14 cm and its diameter is almost 4 cm (the exact diameter of the mouth is distorted by damage). It is slender and cylindrical in shape with concave walls and outwardly bending lip. Below the lip is an area decorated in three bands: the middle section is a guilloche pattern oriented from upper left to lower right; above and below, there are two narrow bands of semi-ovals shaped in a tongue pattern (Fig. 5). The lower part of the beaker has the same pattern, with a rosette of 23 petals radiating from the centre, which projects in the shape of a hollow nipple at the bottom. Every alternate petal has curved incised lines and is separated from the guilloche pattern by a horizontal embossed line. The main area of the body of the vessel, enclosed by the decorative panels described above, is decorated with a dynamic hunting scene that depicts overall movement from right to left.

This scene is composed of four figures, all of which are decorated with incised curved lines. Three are humans and one, a legendary creature. The figure on the right is a standing, bearded archer who attacks moving forward. He has defined muscles. In his right hand he holds a bow and two arrows, and in his left hand, above his head, an upright dagger. On his shoulder, held in place by two bands crossed over his chest, he bears a quiver with arrows. He is dressed in a plain and unornamented short kilt and his upper body is naked. Visible are his prominent nose and ear, and a large eye. His long hair rests on his shoulders and may be tied with fillets, and long vertical lines

⁹ Muscarella 1988, pp. 244–253.

represent his beard. In summary, looking at the overall features of this man in comparison with the other two figures, he is likely to be a soldier or a person of lower rank.

The second figure has the same features as the first, with powerful muscles, and is dressed in a highly ornamented kilt. His head and most of his upper body are missing. What remains of the right arm shows a short-sleeved upper garment, and the hand holds a sword up high. The left hand holds a winged bull's tail and the figure presses down upon the animal's hind leg with his right foot in a symbolic behaviour or movement. The overall features of this person are more ornamented than for the other two and he is like to be a military commander.

The third figure is a vigorous winged bull, decorated with fairly deep body incisions. The mane is edged by parallel wavy grooves and covered with a pattern of short straight lines, single or in pairs. Short and fine lines, depicted in a vertical wavy fashion, are employed to emphasise thick hair on the body of bull. On its head there is an upwardly curving horn and a leaf-shaped ear. The bull, facing straight ahead, stands on its hind legs, its forelegs raised. Its bovine-style tail is raised and bent back over the body, ending in a double curl. The muscles and veins of the legs are depicted by double lines. The bull has a wing in two sections: first, a row of parallel long bands with chevron-shaped tips which represent the main feathers; second, a smaller, similar pattern on the inside near wing-front. The leading edge of the wing is depicted as a ridge with a slight curvature.

The last figure on the left belongs to a person who appears opposite the winged bull. Unfortunately the front part of this figure is destroyed and it is not clear what he is doing or carrying. The part remaining shows long hair, a crown and a long decorated tunic. It is obvious that this person, unlike the other two, is not on the attack; he is peacefully going toward the bull, wearing a highly ornamented dress, and his hand is not raised in a symbol of attack. His dress shows that he has a higher position than the two previously mentioned persons. In fact, in the two figures on the right, the emphasis is on the powerful muscles and attacking gestures, while the third figure is distinguished by his ornamented dress and peaceful gesture. Thus, from the overall appearance of the third person in comparison with the other two, it could be said that he represents a dignified, non-military person.

All the decoration on this beaker is in high relief with a generous use of chasing to exhibit body hair, bone joints, muscles, veins, and clothing decoration. Heavy and fine chasing exist together, creating a very effective and vigorous representation of each figure.

Chronology and Iconography of the beaker

The Sarrez beaker features a unique scene, one that is completely outside the 15 categories identified by Calmeyer on scores of beakers of unknown provenance,¹⁰ most of which are banquet and hunt scenes.¹¹ Significantly, the Sarrez beaker adds another excavated example from western Iran, further establishing the presence of the beakers there. And its locus with other artefacts may eventually help determine its chronological range.

The Sarrez beaker scene reflects Neo-Assyrian art: the way the figures are depicted is comparable with Neo-Assyrian reliefs, decorated ivories and cylinder seals. The winged bull was also

¹⁰ Calmeyer 1973.

¹¹ Writing in 1988, Muscarella (1988, p. 246) believed that just one nipple beaker of this kind had come from an excavation context, namely, at Surkh Dum.



Fig. 6. Ishtar, fully armed, stands on her sacred lion, (Albenda 1978, p. 21, fig. 10).

represented on first-millennium BC ivories, vessels and ornaments. The form and clothing of the warrior is similar to Assyrian costumes, with the short kilt that exposed the legs. The parallel for the figures is on a Neo-Assyrian seal in the British Museum (Fig. 6), published by Albenda¹² and Collon,¹³ which features a figure with almost the same style as the last figure on the Sarrez beaker. They believe that the figure is the warrior Goddess Ishtar. The image of a winged bull presents a similar theme-image prominent in the art of many cultures of the ancient Near East. It suggests unmitigated power, or as at Babylon, perhaps the representative of the God Adad.¹⁴ The winged bull continued into the Achaemenid period, when it can be seen on glazed bricks and plaques.

Conclusion

There are indications that the few excavated artefacts at Sarrez date to the Iron Age III period. The vessels, bracelet, anklets and spearheads are witnesses to this claim. Moreover, the beaker with its new, unique scene reflects that Neo-Assyrian features and art can be dated to between 700 and 600 BC.

¹² Albenda 1978, no. 21, fig. 10.

¹³ Collon 1991, no. 32, fig. 18.

¹⁴ Oates 1979, p. 153.

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Studies on the Structural Characteristics of Achaemenid Pottery from Dahan-E Gholaman

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Abstract

The Achaemenid site of Dahan-E Gholaman lies 44 km southeast of Zabol, eastern Iran. Recovered archaeological records and evidence, including residential, public, and administrative-religious structures, indicate pre-planned and intense urbanisation. Unfortunately, the pottery from Dahan-E Gholaman has not been paid the attention it is due, even though pottery from the site has been studied. The studies show that innovation and demands on the pottery industry created local types of beakers, jars, jugs, and bowls and so on. Research on the pottery characteristics shows that the potters of this site were skilled in controlling the kiln temperature and were able to produce high quality wares, while various forms were commonly in use at the site.

INTRODUCTION

In archaeological studies of the Achaemenid period, papers concentrate on architecture, art and reliefs; pottery is scarcely discussed. As a result, in most of the studies, Achaemenid pottery has been hardly covered. For a long time, Achaemenid pottery has been compared with the published pottery from Schmidt's excavation at Persepolis and the peripheral area.¹ Unfortunately, Ernest Herzfeld did not treat sherds from Persepolis and Pasargad.² This problem can be seen in the Iranian eastern regions as well. Accordingly, Dahan-E Gholaman was chosen as a key site in the east of Iran for the analysis and interpretation of Achaemenid pottery.

DAHAN-E GHOLAMAN

The site is located near Qaleh No village, 44 km southeast of the city of Zabol, in northern Sistan, Iran (Fig. 1). It sits on a high terrace north of the Sanarood River delta, a dry branch of the Hirmand River.³ Dahan-E Gholaman was identified during a survey in 1960 by Umberto Scerrato, an Italian archaeologist. He excavated the site between 1962 and 1965 and published

¹ Schmidt 1957.

² Stronach 1978, p. 252.

³ Sajjadi 2000b, p. 162.

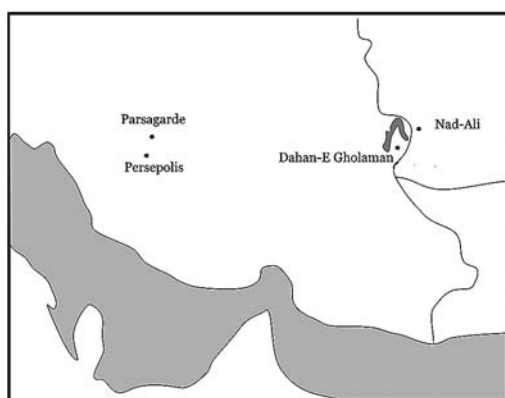


Fig. 1. Map of southern Iran showing the location of Dahan-E Gholaman.

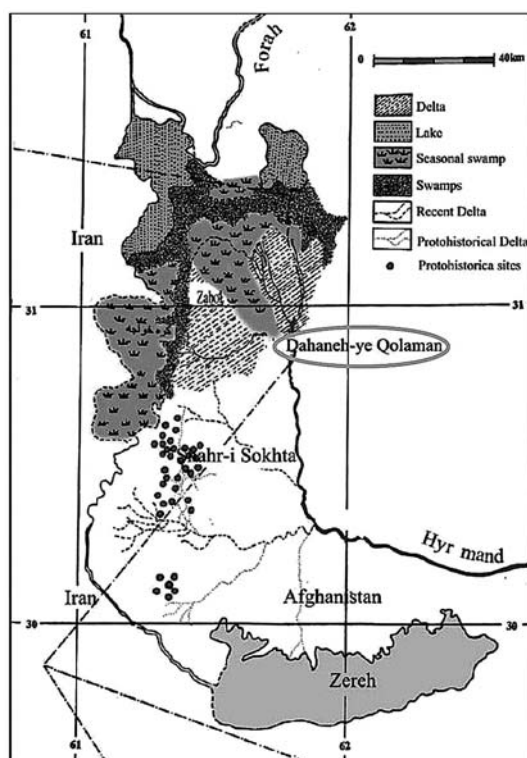


Fig. 2. The location of Dahan-E Gholaman (After Sajjadi 2007: fig. 1).

his results in several papers.⁴ Seyyed Mansoor Seyyed Sajjadi, head of Sistan's Shahr-i-sukhteh expedition, excavated Dahan-E Gholaman between 2000 and 2005. He also published several articles about the site.⁵ The remains of Dahan-E Gholaman are located on a natural chain of hills, 5.1 km in length and 300–800 m wide. The Sanaroud drained delta is nearby (Fig. 2).⁶ The complex includes 40 numbered structures which the Italian expedition prefixed with "QN" for Qaleh No village (Fig. 3). They can be categorised into five types, based on their function: administrative-public; religious; residential; industrial; and military structures.⁷

The excavators believe the site was evacuated gradually and to a plan. The only remains are some pottery, stone and plaster works. There were remains of mills, basins, storages, grinding stones, ovens,⁸ and terracotta columns on floors and also on platforms recovered in structure 15

⁴ Scerrato 1962, 1966a, 1966b, 1979.

⁵ Sajjadi 2000a; see also Sajjadi and Saber Moghaddam 2003; Sajjadi 2001; Sajjadi and Saber Moghaddam 2004.

⁶ Sajjadi 2001, p. 10. For a plan of the structures at Dohan-E Gholamn, see Mohammadkhani 2012, fig. 3.

⁷ Mehr Afarin 2005, p. 307.

⁸ Mehr Afarin 2005, pp. 13–14.

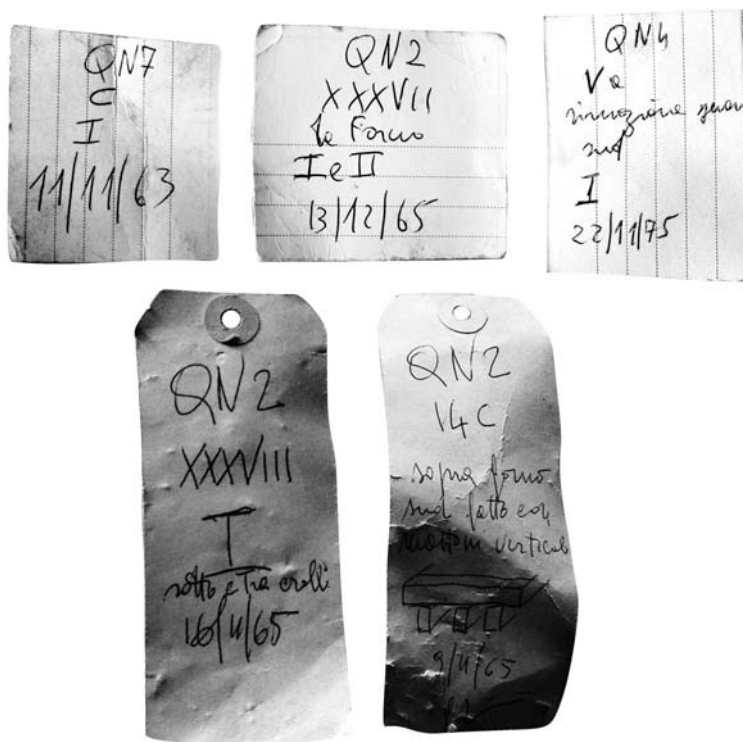


Fig. 3. Sample of labels used by the Italian Expeditions of 1963 and 1965.

(QN. 15).⁹ During the third excavation season conducted by Iranian researchers at Dahan-E Gholaman, Seyyed Sajjadi recovered paintings, the first for the site. They were in structures 25 and 15.¹⁰ The terracotta cups from the site are among the most significant materials recovered;¹¹ most findings consisted of sherds.

THE POTTERY OF DAHAN-E GHOLAMAN

The first report of Dahan-E Gholaman pottery was made by Scerrato,¹² followed by Bruno Genito.¹³ Four decades after Scerrato, Sajjadi reported on some of the ceramics from the site;¹⁴ Reza MehrAfarin also mentioned a few of the ceramics in his dissertation.¹⁵ The latest research

⁹ Mehr Afarin 2005, pp. 24–26.

¹⁰ Sajjadi 2007, p. 146.

¹¹ Sajjadi 2007, p. 143.

¹² Scerrato 1966a.

¹³ Genito 1990.

¹⁴ Sajjadi 2000a; see also Sajjadi 2001; Sajjadi and Saber Moghaddam 2003.

¹⁵ Mehr Afarin 2005.

on the pottery of Dahan-E Gholaman belongs to Giulio Maresca.¹⁶ The research described in this paper builds, of course, on the work of our predecessors.¹⁷ The present paper is based on research on 2370 characteristic sherds excavated from Dahan-E Gholaman by the Iran and Italian joint expedition. Table 1 indicates that the data are mostly from structure No. 2, where there was a high density of sherds, among the available assemblages; however, it should be noted that excavation was restricted to test trenches in structures nos 5 and 1, and some other structures were never excavated at all.¹⁸

Table 1. Percentage of pottery recovered by structure.

Building No. (QN.)	Excavated By	Percent
QN. 2	Umberto Scerrato	59.83%
QN. 3	Umberto Scerrato	1.56%
QN. 4	Umberto Scerrato	5.99%
QN. 6	Umberto Scerrato	6.75%
QN. 6-7	Umberto Scerrato	6.91%
QN. 7	Umberto Scerrato	2.61%
QN. 15	S. M. S. Sajjadi	3.67%
QN. 16	S. M. S. Sajjadi	0.88%
QN. 22	S. M. S. Sajjadi	0.33%
QN. 23	S. M. S. Sajjadi	3.67%
Unknown Buildings	S. M. S. Sajjadi and Umberto Scerrato	7.76%
Total		100%

STRUCTURAL CHARACTERISTICS OF THE DAHAN-E GHOLAMAN POTTERY

Pottery cores vary in colour; orange buff (5YR 6/6) is the most abundant colour in excavated sherds from Dahan-E Gholaman (Fig. 4).

There are no glazed samples among the excavated pot sherds from Dahan-E Gholaman. More than 57 per cent of excavated sherds have a external slip (Fig. 5), while 63 per cent are covered with a thin layer of clay (washed), internally, indicating that potters tended to use thick, dense slip on ware surfaces whereas the inner surfaces were not finely furbished.

Statistically, the slip and wash colour from Dahan-E Gholaman ranged through buff, including light buff, buff, pink buff, brown buff, orange buff, green buff, yellow buff (Fig. 6).

¹⁶ Maresca 2010.

¹⁷ Zehbari 2012.

¹⁸ Scerrato 1966a, p. 25.

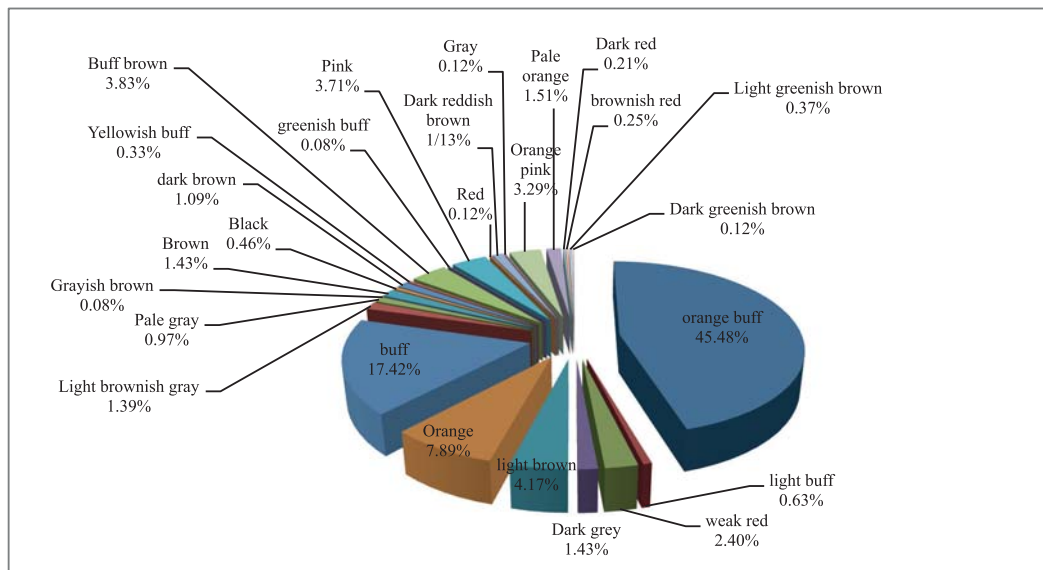


Fig. 4. Core colours in pottery samples from the site.

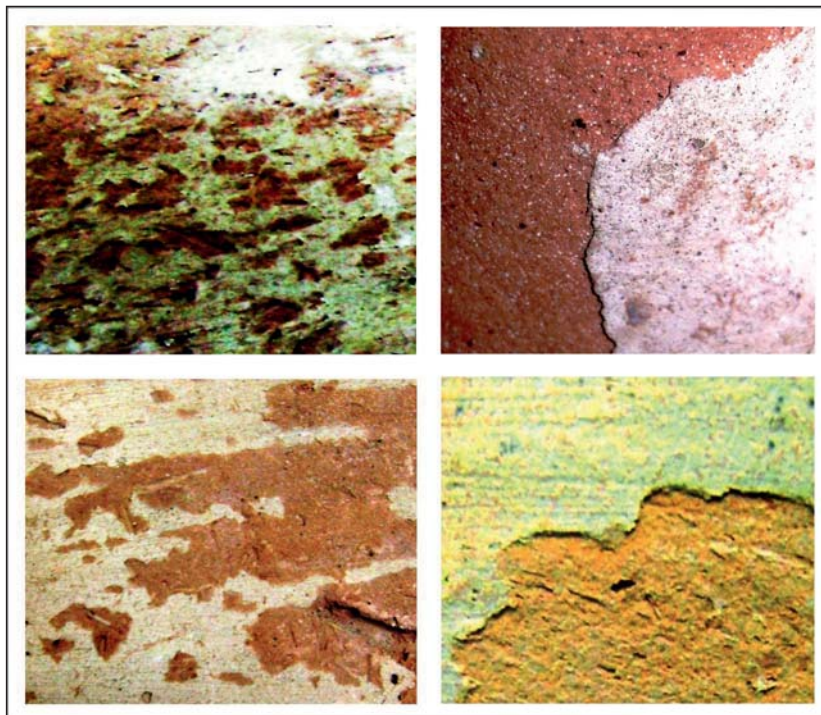


Fig. 5. Samples of thick slip on external sherd surface.

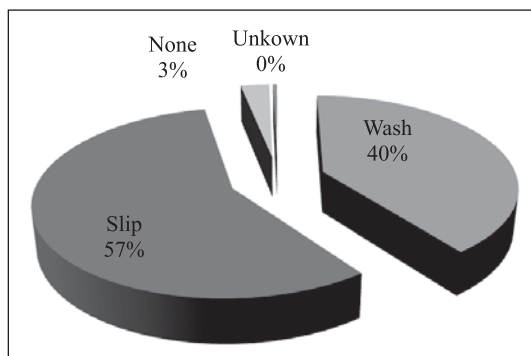


Fig. 6. Comparison between slip and wash surfaces.

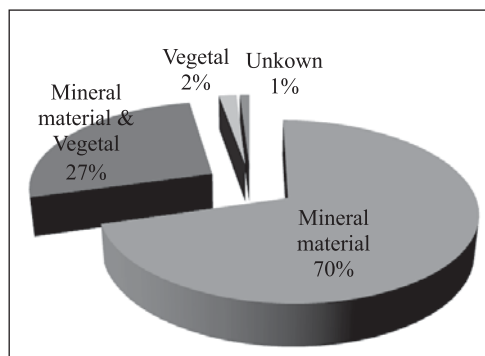


Fig. 7. Temper of samples.

The temper of many of the studied samples contained white particles, tiny grains from the calcite family. Ground mica grains are another inorganic substance abundant in the soil of Sistan and most of the sherds contained ground mica in their structure. This is seen in various colours; gold, silver, and colourless (glass-like). The grain dimensions vary up to 0.5 mm. Seventy per cent of the assemblage has inorganic temper and two per cent has organic temper. The other 27 per cent consists of combinations of inorganic temper — including white particles, clay, and sand — and organic temper (Figs. 7 & 8).

Mica was unintentionally included by potters in the fabric of their pottery. We can confirm the unintentional addition of mica to the clay on the following grounds:

1. There are mica particles visible in soils of the Sistan region. The dimensions of mica particles in Sistan soil are similar to the particle dimensions in the fabric of the Dahan-E Gholaman pottery. Thus, it is probable the mica in the fabric is the same mica as appears in the region's soil.
2. Mica is seen in other wares from the Sistan region, from the Bronze Age to the Islamic era.¹⁹
3. Experiments in grinding and adding mica to soil samples from Sistan demonstrated the hardness and insolubility of the mica. There was no similarity between our experimental sample and the original wares of Dahan-E Gholaman. The mica grains in the experimental wares were rough and ordered as flakes within the clay. On the other hand, experiments using the local soil of Dahan-E Gholaman resulted in wares similar to the original pottery finds; this was due to the obvious presence of mica in the region's soil, reflected in the texture of cups from the site. According to our experiments, the mica in the soil has been formed by natural erosion and it is unlikely to have been extracted, ground and added to the pottery fabric by the local potters.

¹⁹ Personal observations.

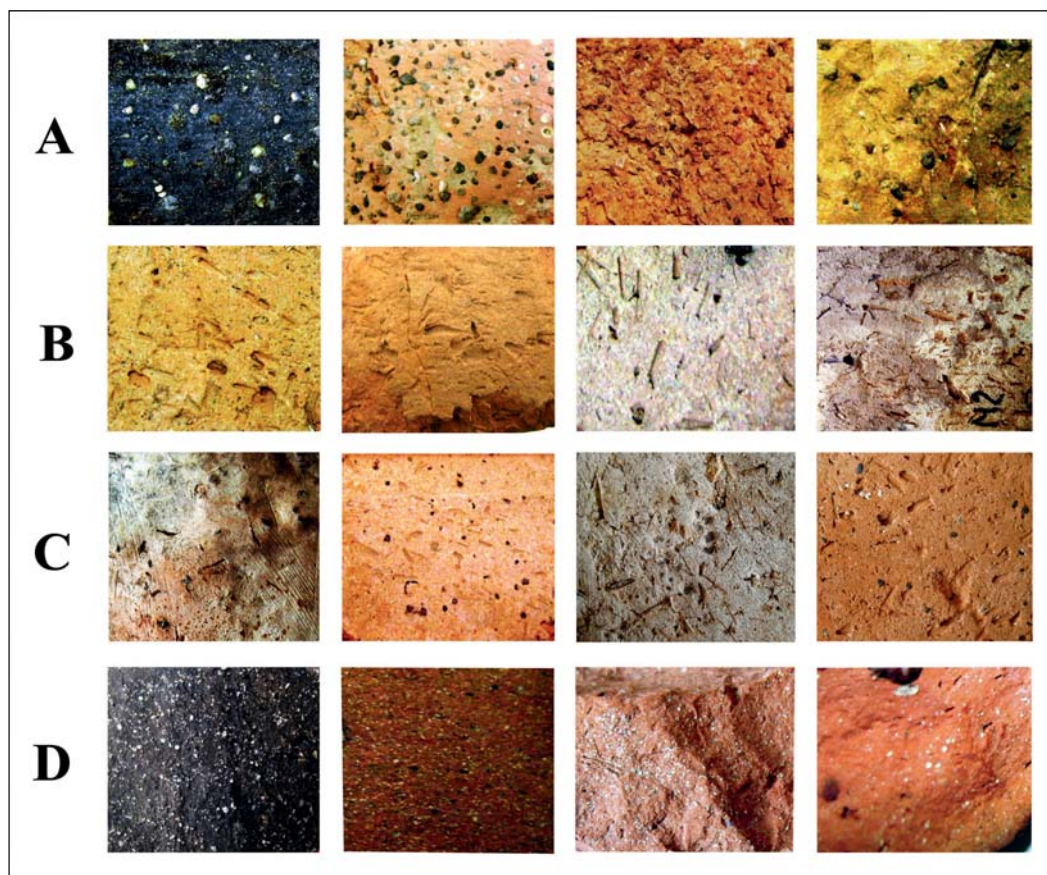


Fig. 8. Various tempers in pottery from Dahan-E Gholaman.
Row A: sand; row B: organic; row C: combined; row D: white particles.

Statistics show the site's wares were mostly wheel made, 96.20 per cent, whereas approximately 2 per cent — mainly coarse wares — are hand made. For the remaining part of the assemblage, the production style was not recognisable.

Based on personal observations, study of the oxidation process as it has affected the Achaemenid pottery of Dahan-E Gholaman shows the potters' skills in controlling kiln temperatures: 97.21 per cent of the pottery sampled was fired in controlled conditions. The Achaemenid potters were highly skilled in oxidation control in the kiln, resulting in well-fired pottery and no carbon confinement in the texture of the fabric (Fig. 9). From the point of view of texture, the site's wares are highly dense. There are some rare porous examples, which resulted from vegetal temper being used, rather than from improper kneading.

The external part of the pottery bases is very informative. In Fig. 11, Row A shows bases with a string cut impression; Row B shows bases smoothed by the potter or separated from the wheel using a sharp object and Row C shows wares eroded through time and wear and tear.

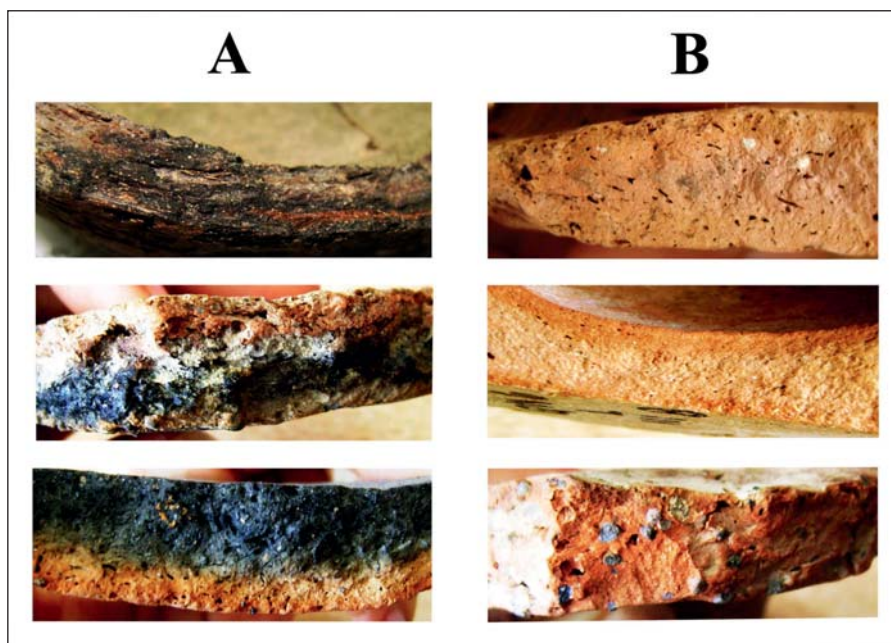


Fig. 9. Fired pottery samples (row A: reduction kiln (under-fired); row B: oxidation kiln (well fired)).

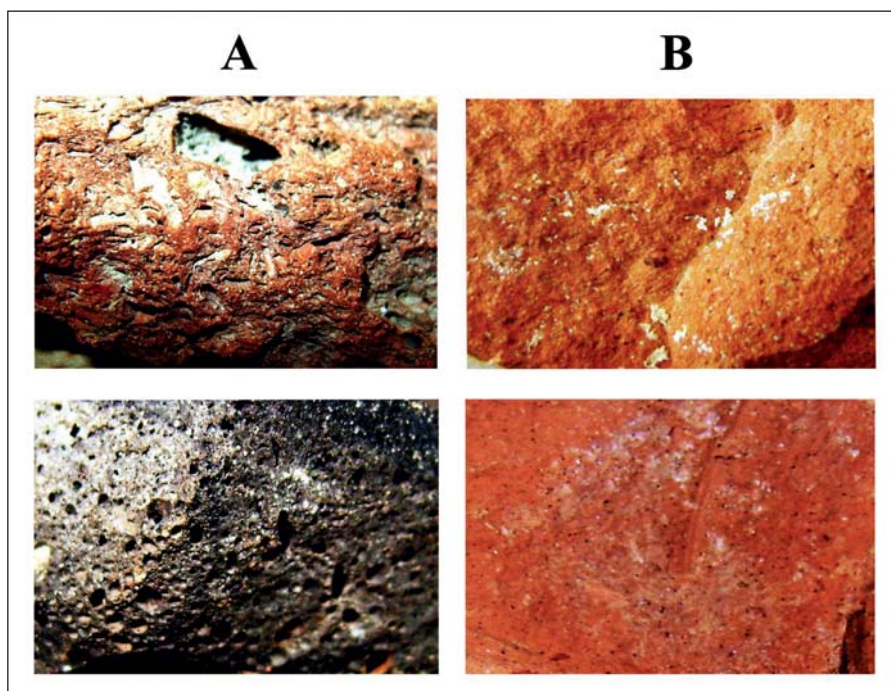


Fig. 10. Texture density of pottery from the site.

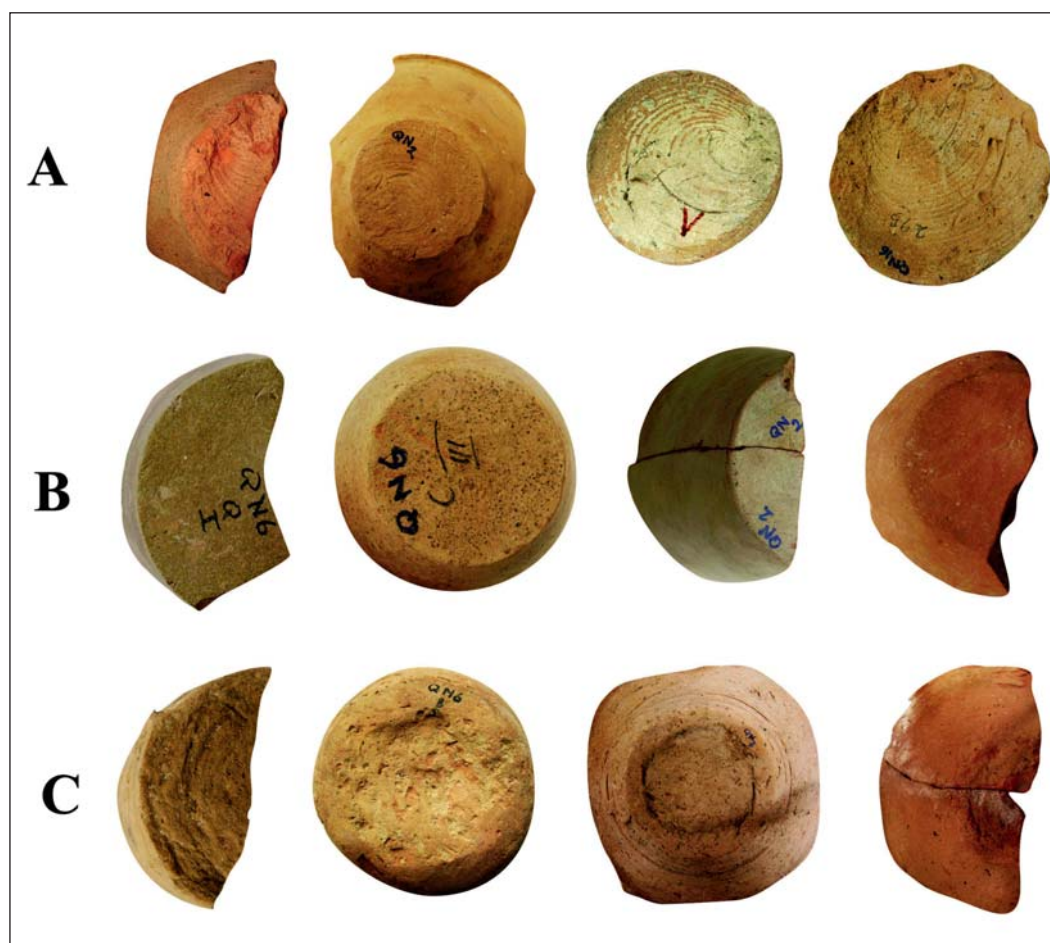


Fig. 11. External view of pottery bases from the site.

DECORATION STYLE ON WARES FROM DAHAN-E GHOLAMAN

Ninety per cent of the excavated sherds were plain, and only 10 per cent were decorated. The site's potters used characteristic styles to decorate their productions. The techniques used in decorating the site's wares are described below (and see Fig. 12):

1. Incised decoration

The dominant technique in pottery decoration was incision, used to create anthropomorphic (78 per cent), geometrical (16 per cent), and unidentified motifs.

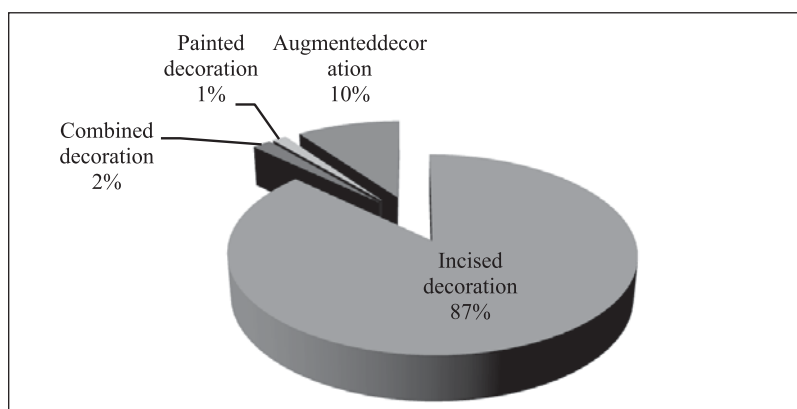


Fig. 12. Types of decoration techniques on pottery at the site.

A. *Anthropomorphic (?) motifs*

These are stylised drawings, probably showing a standing figure (Figs 17/13–14, 19/27–29, 22/47–53, 23/60, 25/74, 26/80–84, 30/114, 119 and 32/141–144). The body consists of three parts: a rounded top as head, a vertical line as trunk, and a horizontal line cutting the trunk. The horizontal line indicates shoulders and also bends on both sides to show the hands, whereas there is nothing in the design to signal legs. At first glance, it seems that the motif was worked by a child, perhaps one in training. The anthropomorphic theme at Dahan-E Gholaman is only incised. Seventy-eight per cent of incised decorations on the wares of Dahan-E Gholaman used this motif. Geometric motifs comprise 16 per cent and unidentified motifs 6 per cent of the assemblage. Most of the anthropomorphic motifs (92 per cent) are on the outer surface of the wares, whereas the remainder are on the inner surface, except one that is worked on the base.

B. *Geometric motifs*

The geometric motifs used in the site's wares are plain or combed horizontal, wavy, crossed or tangled lines (Figs 16/7, 18/18, 19/25, 25/72–73, and 32/138–140). Worked on the outer surfaces of the wares, geometrical motifs comprise 16 per cent of decorations in the assemblage; there is no geometrical incised design on an inner surface.

2. *Augmented decoration*

These motifs comprise 10 per cent of the whole assemblage (Figs 19/24, 23/61, 25/70–71, and 27/85–86). Augmented decorations were usually worked on jars and big vessels. These motifs were used to cover joining lines in huge vessels that were worked in several phases.

3. *Painted decoration*

Only three samples (1 per cent) were worked with this technique among the assemblage. Painting was common in Fars, Khuzistan, western Iran, and other regions.

4. Combined decoration

Two per cent of the assemblage features combined decoration. These examples can be subdivided into “incised and augmented”, “incised and burnished”, and “painted and augmented” (Fig. 32/135).

FURBISHING THE POTTERY OF DAHAN-E GHOLAMAN

The surfaces of Dahan-E Gholaman wares were furbished in two ways: polishing and burnishing.

1. *Smooth*. This style was applied on inner (11 per cent), and outer (45 per cent) surfaces. Examples where both the inner and outer surfaces were worked in this way account for 44 per cent of the total assemblage. Wares were thickly slipped in red, dark red, brown red and buff, then smoothed (Figs 27/89–90, 28/95–96, 100, 31/126–128, 134).
2. *Burnished*. Burnishing was seen on inner (20 per cent) and outer (30 per cent) surfaces, and in some cases on both sides. As with smoothed decoration, wares were thickly slipped then burnished, probably using a kind of grindstone (Figs 23/ 54–55, 24/66–67, 25/75, and 28/92–94).

Relation Between Vessel Form and Decoration Techniques in Dahan-E Gholaman

According to studies on different ware forms from the site, and the relation between forms and decoration techniques, different decorations can be recognised on vats, bowls, plates, beakers, and jars and jugs (Fig. 13). No small decorated vessels such as basins, pitchers and trumpet wares were identified within the assemblage (table 2). It should be noted, however, that where the sample studied is a fragment of an intact vessel, the fact that it is not a decorated section does not necessarily mean that the hypothetical vessel was an entirely plain one.

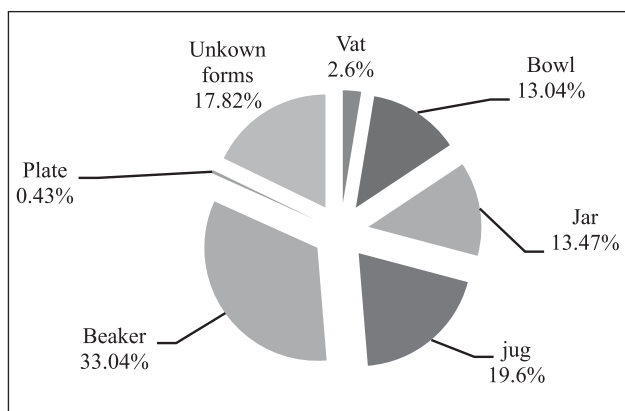


Fig. 13. Relation between decoration and pottery forms in the assemblage.

Table 2. Relation between decoration techniques and pottery forms in pottery of Dahan-E Gholaman.

<div> <div>Decoration</div> <div>Vessel form</div> </div>		Open Form			Cylinder shaped vessel	Closed Form	
		Vat	Bowl	Plate	Beaker	jug	Jar
Incised decoration	Abstract human motif	*	*		*	*	*
	Geometrical motif	*				*	*
	Unknown				*	*	
Painted decoration			*			*	
Raised decoration							*
Burnished decoration			*			*	
Smoothed decoration			*	*		*	
Mixed decoration			*				*

Table 2. Indicates that decoration was mostly worked on bowls and jars. Augmented decorations are seen only on vats, while burnished and smoothed techniques were used only on bowls, plates and jars.

TPOLOGY AND TYPOLOGICAL COMPARISON

One of the first stages in vessel form recognition is identifying the rim angle. Rim angle is the angle between the rim and the horizon (diameter). If it is 90°, the vessel opening is vertical (Fig. 14, sketch A) and the vessel will be a cup, basin, jar or flask with a vertical opening. If the rim angle is less than 90°, the vessel opening is narrow (Fig. 14, sketch B); however, bearing in mind coarseness or smoothness of the vessel, it could be a vat or a jar. And if the angle is more than 90°, the vessel will have a wide opening (Fig. 14, sketch C) and will be a bowl or a plate. However, the priority in categorising a vessel in some cases was given here to the general form of the vessel, rather than rim angle (Fig. 24, sketch 66; Fig. 23, sketch 54). The vessels are described typologically according to the chart in Fig. 15, for greater consistency.

Buff (Figs 16–19):

Open Forms: (Figs 16–17)

No. 1: The sample is comparable, from a morphological point of view and in form, to examples from the Royal City of Susa II.²⁰

²⁰ Miroschedji 1987, fig. 10, no. 8.

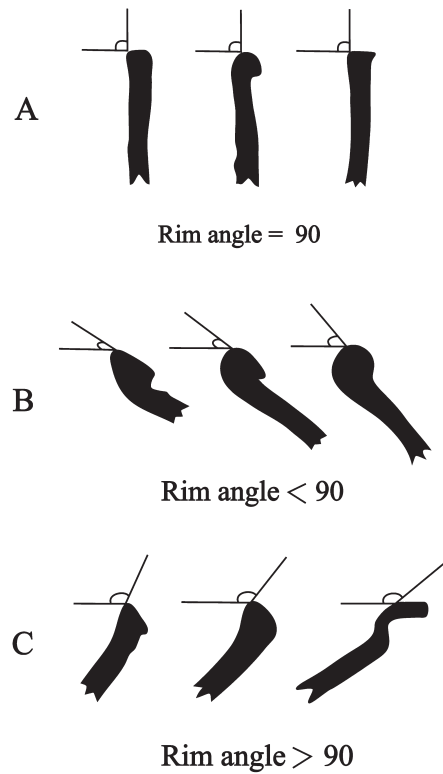


Fig. 14. Rim angles in the vessels of the site.

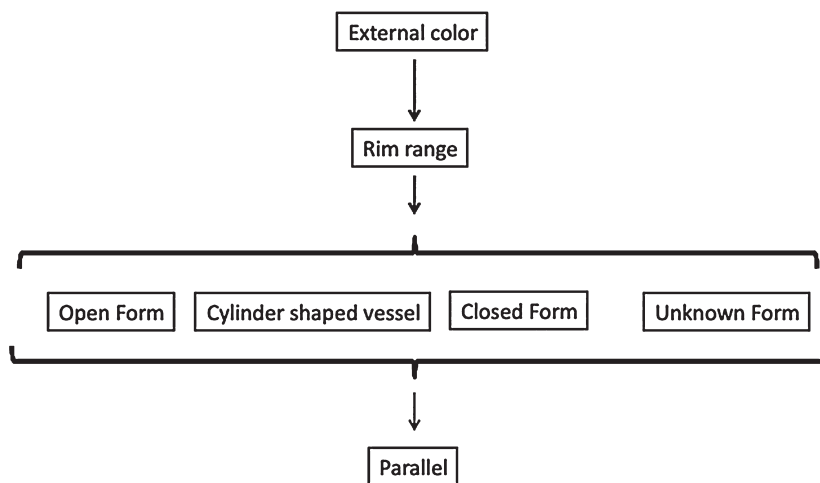


Fig. 15. Typological methodology used.

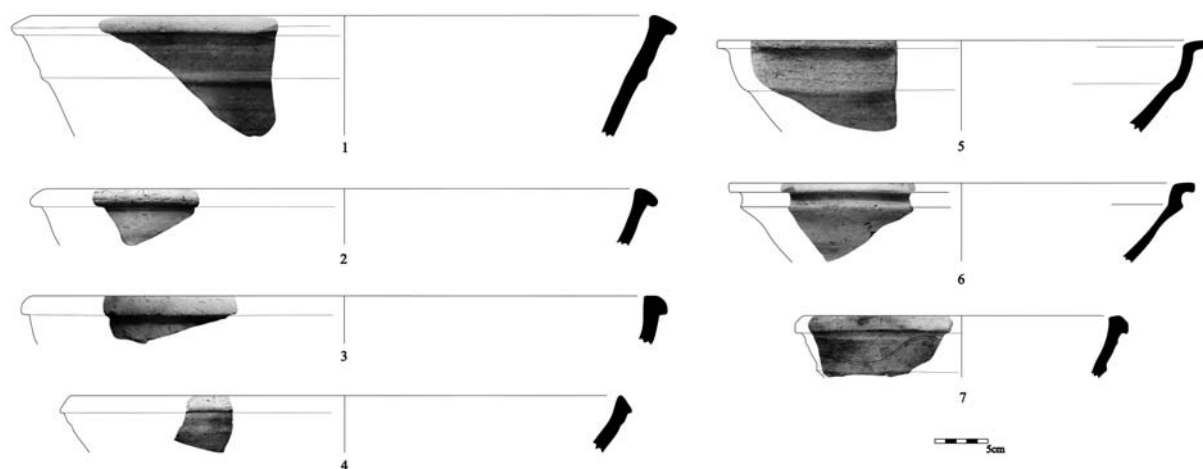


Fig. 16. Buff open forms.

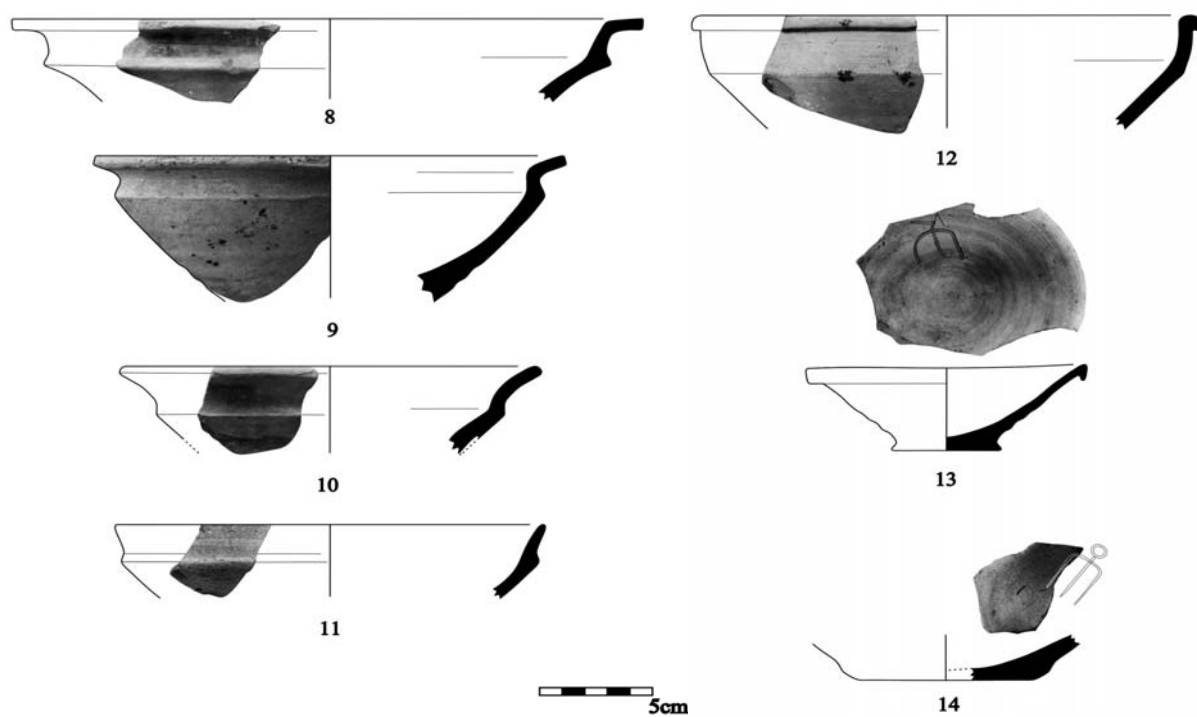


Fig. 17. Buff open forms.

No. 2: The sample is comparable from a morphological point of view and in form to examples from Naghsh-E Rostam,²¹ and from a morphological point of view and in form and external coating colour to examples from Qaleh Kali.²²

No. 3: The sample is comparable from a morphological point of view and in form to examples from the Bardsir survey.²³

No. 4: The sample is comparable from a morphological point of view and in form to examples from the Bushehr survey,²⁴ and from a morphological point of view and in form and external coating colour to examples from the systematic survey of Persepolis.²⁵

No. 5: The sample is comparable from a morphological point of view and in form to examples from Baba Jan.²⁶

No. 6: The sample is comparable from a morphological point of view and in form and external coating colour, to examples from Nad Ali.²⁷

No. 10: The sample is comparable from a morphological point of view and in form to examples from Chogha Mish, Hasanlu IIIa, Yahya, and Baba Jan.²⁸

No. 11: The sample is comparable from a morphological point of view and in form to examples from Narges Tappeh.²⁹

No. 12: The sample is comparable from a morphological point of view and in form and the external coating colour to examples from Persepolis plain.³⁰

No. 13: The sample is morphologically comparable to examples from Nad Ali³¹ and Tol-e Spid,³² and comparable in decoration to examples from Nad Ali.³³

No. 14: The sample is comparable in decoration to examples from Nad Ali.³⁴

Cylinder-shaped vessels (Fig. 19: 28–29)

Nos 28, 29: The sample is comparable in decoration to examples from Nad Ali.³⁵

Closed Forms (Figs 18 and 19: 21–27):

No. 15: The sample is comparable from a morphological point of view and in form to examples from Tol-e Nurabad.³⁶

²¹ Kleiss 1981, fig. 7, no. 15.

²² Potts *et al.* 2009, pl. 18, QKC 1438.

²³ Khosrowzadeh and Ali 2005, fig. 3, no. 7.

²⁴ Carter *et al.* 2006, p. 30, no. 19.

²⁵ Atai 2004, pl. 24, no. 10.

²⁶ Goff 1970, fig. 8, no. 8.

²⁷ Dales 1977, pl. 19, no. 3.

²⁸ Delougaz and Kantor 1996, pl. 74/f. (Chogha Mish); Dyson 1999, fig. 8/e (Hasanlu IIIa); Karlovsky and Magee 2004, fig. 5.5/ b (Yahya); Goff 1970, fig. 8, no. 7 (Baba Jan).

²⁹ Atai and Abbasi 2009, pl. 2/5.

³⁰ Sumner 1986, fig. III 1/H.

³¹ Dales 1977, pl. 18, no. 8.

³² Petrie *et al.* 2006, fig. 4.104, TS 252.

³³ Ghirshman 1959, fig. G5, the second base and lid.

³⁴ Ghirshman 1959, fig. G5, the second base and lid.

³⁵ Ghirshman 1959, fig. G5, the second base and lid.

³⁶ Weeks *et al.* 2006, fig. 3.134/ TNP 2148.

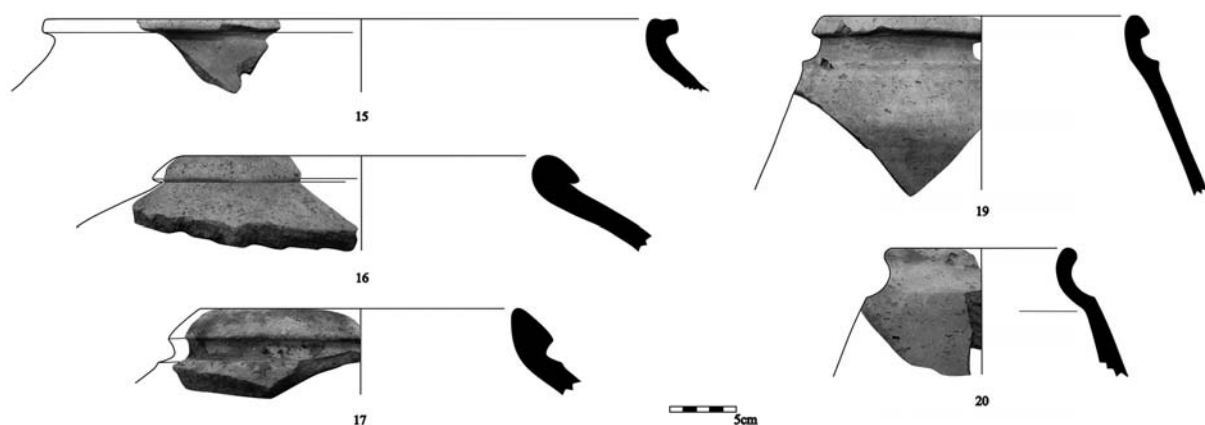


Fig. 18. Buff closed forms.

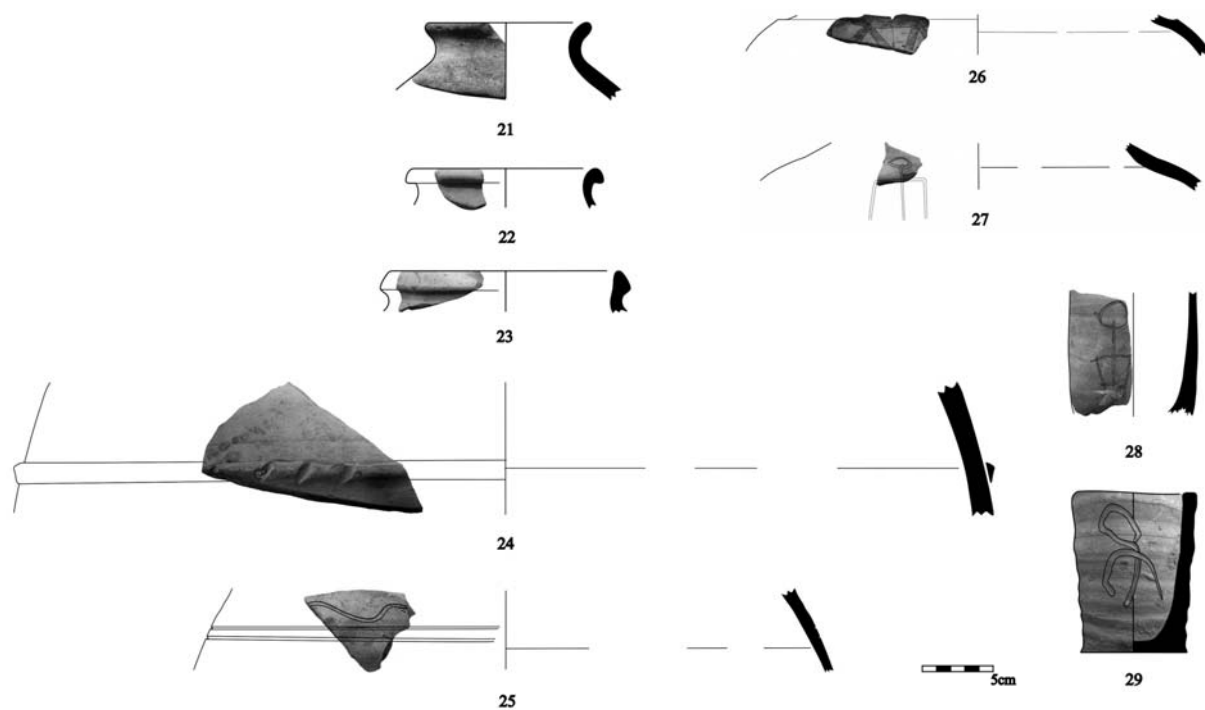


Fig. 19. Buff closed forms and cylinder-shaped vessels.

No. 16: The sample is comparable from a morphological point of view and in form to examples from the systematic survey of Persepolis³⁷ and Qaleh kali,³⁸ and from a morphological point of view and in form and the external coating colour with examples from Teppeh Darooqeh (KS 1593).³⁹

No. 21: The sample is comparable from a morphological point of view and in form and the external coating colour to examples from Nad Ali.⁴⁰

No. 22: The sample is comparable from a morphological point of view and in form to examples from the systematic survey of Persepolis.⁴¹

No. 23: The sample is comparable from a morphological point of view and in form and the external coating colour to examples from Yahya.⁴²

No. 24: The sample is comparable in decoration to examples from Qaleh kali.⁴³

No. 26: The sample is comparable in decoration to examples from Qaleh Khezerlu.⁴⁴

No. 27: The sample is comparable in decoration to examples from Nad Ali.⁴⁵

Yellowish Buff (Figs 20–22)

Open Forms (Fig. 20)

No. 31: The sample is comparable from a morphological point of view and in form to examples from Qaleh kali.⁴⁶

No. 32: The sample is comparable from a morphological point of view and in form and the external coating colour to examples from Teppeh Darooqeh (KS 1593).⁴⁷

No. 33: The sample is comparable from a morphological point of view and in form and the external coating colour to examples from Nad Ali,⁴⁸ and from a morphological point of view and in form to examples from Persepolis plain.⁴⁹

No. 34: The sample is comparable, from a morphological point of view, and in form and the external coating colour to examples from Agh Tappeh.⁵⁰

No. 35: The sample is comparable from a morphological point of view and in form to examples from Qalaychi.⁵¹

³⁷ Atai 2004, pl. 41, no. 19.

³⁸ Potts *et al.*, 2009, pl. 11, QKC 1021.

³⁹ Atai 2005b, fig. 138/22.

⁴⁰ Dales 1977, pl. 13, no. 1.

⁴¹ Atai 2004, pl. 45, no. 4.

⁴² Karlovsky 1970, fig. 8/P.

⁴³ Potts *et al.* 2009, pl. 20, QKC 1118.

⁴⁴ Dyson 1999, fig. 8a/d.

⁴⁵ Ghirshman 1959, fig. G5, the second base and lid.

⁴⁶ Potts *et al.* 2009, pl. 18/QKC 1438.

⁴⁷ Atai 2005b, fig. 139/5.

⁴⁸ Dales 1977, pl. 19, no. 12.

⁴⁹ Sumner 1986, fig. III 1/L.

⁵⁰ Malek Shahmirzadi and Nowkandeh 2000, pl. 22, no. 1.

⁵¹ Kargar 2004, fig. 15/first pottery on left.

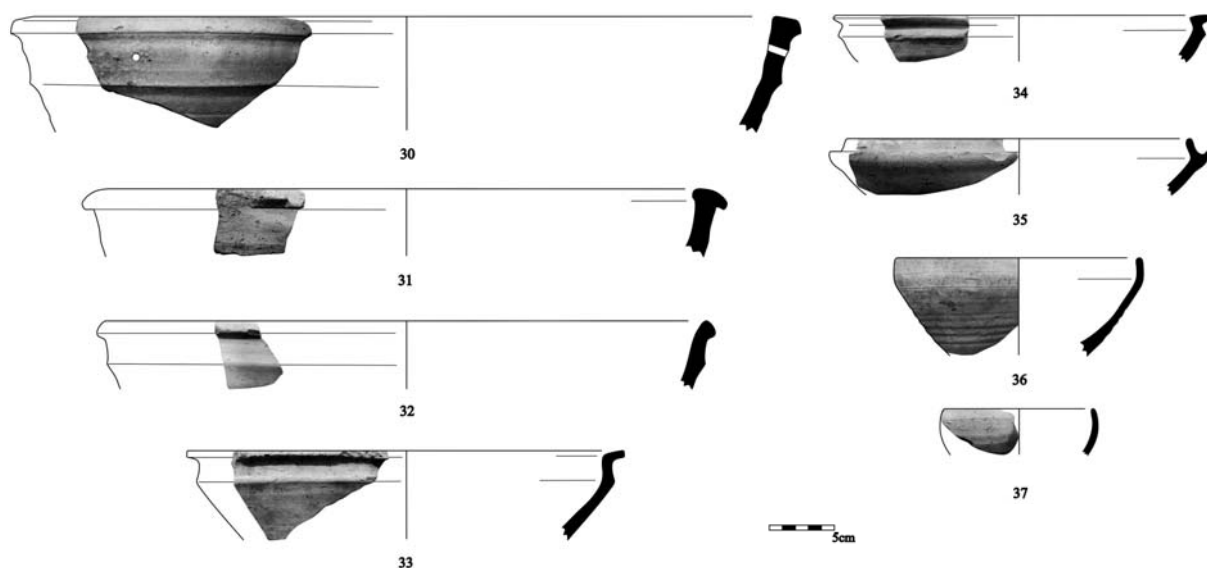


Fig. 20. Yellowish buff open forms.

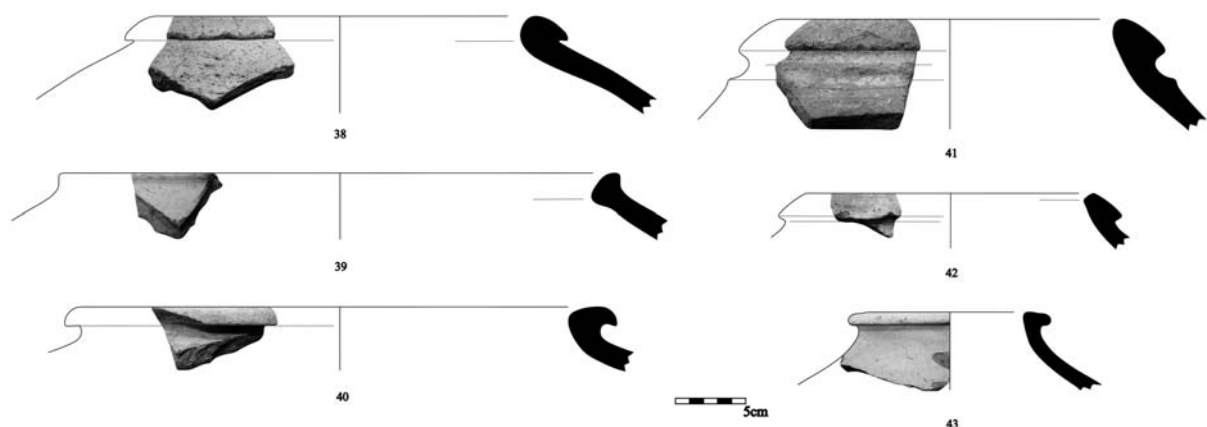


Fig. 21. Yellowish buff closed forms.

No. 36: The sample is comparable from a morphological point of view and in form and the external coating colour with examples from Qaleh kali.⁵²

No. 37: The sample is comparable from a morphological point of view and in form and the external coating colour to examples from Yahya,⁵³ and comparable from a morphological point

⁵² Potts *et al.* 2009, pl. 9/QKC 1018.

⁵³ Karlovsky 1970, fig. 8/Q.

of view and in form to examples from Persepolis plain, Tol-e Spid, the Miyanab (Shooshtar) plain survey, and Narges Tappeh.⁵⁴

Cylinder-shaped vessels (Fig. 22: 47–53)

Nos 47–53: The sample is comparable in decoration to examples from Nad Ali.⁵⁵

Closed Forms (Figs 21 and 22: 44–46)

No. 38: The sample is comparable from a morphological point of view and in form and the external coating colour to examples from the systematic survey of Persepolis.⁵⁶

No. 39: The sample is comparable from a morphological point of view and in form to examples from the Royal City of Susa II.⁵⁷

No. 41: The sample is comparable from a morphological point of view and in form to examples from Nad Ali.⁵⁸

No. 42: The sample is comparable from a morphological point of view and in form to examples from the Royal City of Susa II.⁵⁹

No. 43: The sample is comparable from a morphological point of view and in form to examples from Yahya.⁶⁰

No. 44: The sample is comparable, from a morphological point of view and in form and the external coating colour to examples from Nad Ali,⁶¹ and from a morphological point of view and in form to examples from Erk Qala.⁶²

No. 46: The sample is comparable from a morphological point of view and in form to examples from Tol-e Spid.⁶³

Orange (Fig. 23)

Open Forms (Fig. 23: 54–55)

No. 54: The sample is comparable from a morphological point of view and in form to examples from Qalaychi.⁶⁴

No. 55: The sample is comparable from a morphological point of view and in form to examples from Akra, Charsada, and Nad Ali.⁶⁵

⁵⁴ Sumner 1986, fig. III 2/p (Persepolis plain); Petrie *et al.* 2006, fig. 4.95, TS 448 (Tol-e Spid); Moghaddam *et al.* 2003, fig. 16, no. 8 (Miyanab); Atai and Abbasi 2009, pl. 1/1. N (Narges Tappeh).

⁵⁵ Ghirshman 1959, fig. G5, the second base and lid.

⁵⁶ Atai 2004, pl. 41, no. 19.

⁵⁷ Miroschedji 1987, fig. 15, no. 8.

⁵⁸ Dales 1977, pl. 25, no. 3.

⁵⁹ Miroschedji 1987, fig. 15, no. 3.

⁶⁰ Karlovsky and Magee 2004, fig. 5.26/c.

⁶¹ Dales 1977, pl. 16, no. 3.

⁶² Usmanova 1992, fig. 5, no. 13.

⁶³ Petrie *et al.* 2006, fig. 4.95, TS 440.

⁶⁴ Kargar 2004, fig. 15/first pottery on left.

⁶⁵ Magee *et al.* 2005, Fig. 15/b (Akra); Wheeler 1962, fig. 16, no. 59 (Charsada); Dales 1977, pl. 21, no. 1 (Nad-Ali).

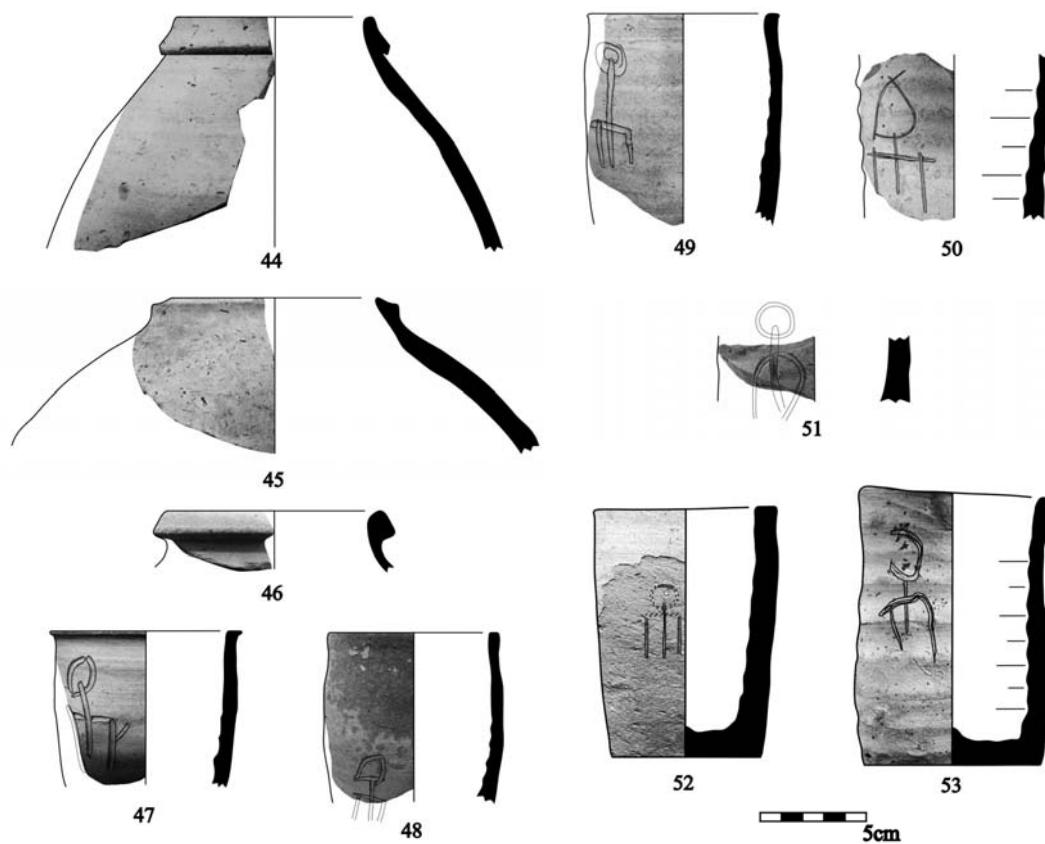


Fig. 22. Yellowish buff closed forms and cylinder-shaped vessels.

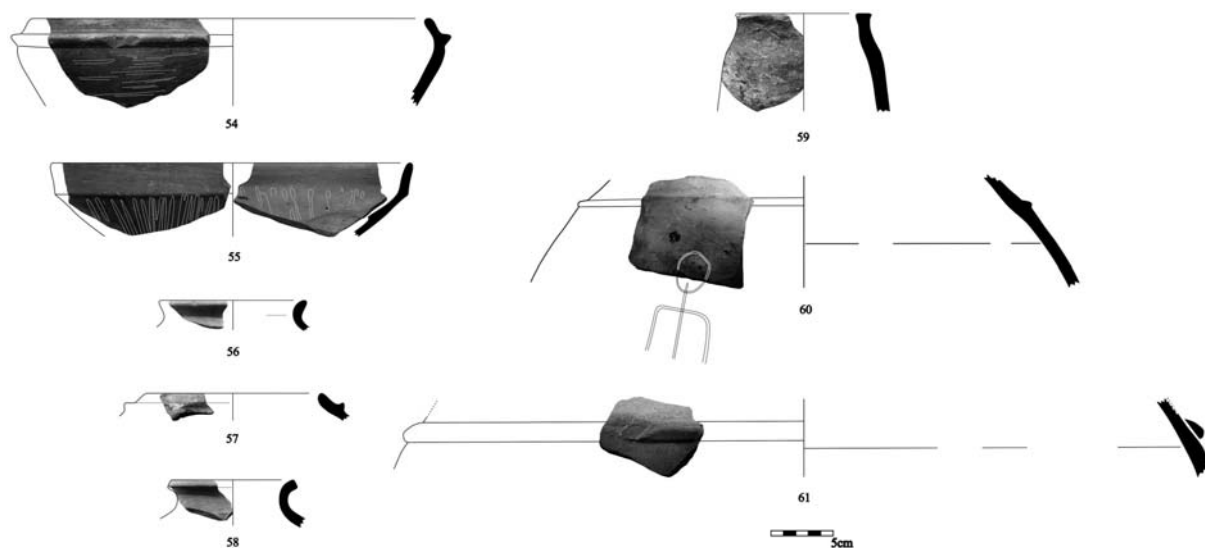


Fig. 23. Orange open forms and closed forms.

Closed Forms (Fig. 23: 56–61)

No. 56: The sample is comparable in form to examples from Tol-e Spid.⁶⁶

No. 57: The sample is comparable from a morphological point of view and in form and the external coating colour to examples from Charsada.⁶⁷

No. 58: The sample is comparable from a morphological point of view and in form to examples from the systematic survey of Persepolis.⁶⁸

No. 60: The sample is comparable in decoration to examples from Nad Ali.⁶⁹

*Pink (Figs 24–26)**Open Forms (Fig. 24)*

No. 64: The sample is comparable from a morphological point of view and in form to examples from Cimin Tepe II.⁷⁰

No. 65: The sample is comparable from a morphological point of view and in form to examples from Nad Ali.⁷¹

No. 66: The sample is comparable from a morphological point of view and in form to examples from Akra, Charsada, and Nad Ali.⁷²

No. 67: The sample is comparable from a morphological point of view and in form to examples from Nad Ali,⁷³ and Ur.⁷⁴

No. 68: The sample is comparable from a morphological point of view and in form to examples from Nad Ali.⁷⁵

Cylinder-shaped vessels (Fig. 26: 80–84)

Nos 80–84: The sample is comparable in decoration to examples from Nad Ali.⁷⁶

Closed Forms (Figs 25: 70–71 and 26: 76–79)

No. 76: The sample is comparable from a morphological point of view and in form to examples from Narges Tappeh.⁷⁷

⁶⁶ Petrie *et al.* 2006, fig. 4.95, TS 521.

⁶⁷ Wheeler 1962, fig. 14, no. 37.

⁶⁸ Atai 2004, pl. 46, no. 9.

⁶⁹ Ghirshman 1959, fig. G5, the second base and lid.

⁷⁰ Summers, 1993, fig. 5, no. 9.

⁷¹ Dales 1977, pl. 19, no. 2.

⁷² Magee *et al.* 2005, fig. 15/b (Akra); Wheeler 1962, fig. 16, no. 59 (Charsada); Dales 1977, pl. 21, no. 1 (Nad-Ali).

⁷³ Dales, pl. 21, no. 6.

⁷⁴ Fleming, 1989, fig 1/G.

⁷⁵ Dales 1977, pl. 19, no. 12.

⁷⁶ Ghirshman 1959, fig. G5, the second base and lid.

⁷⁷ Atai and Abbasi 2009, pl. 3/4.

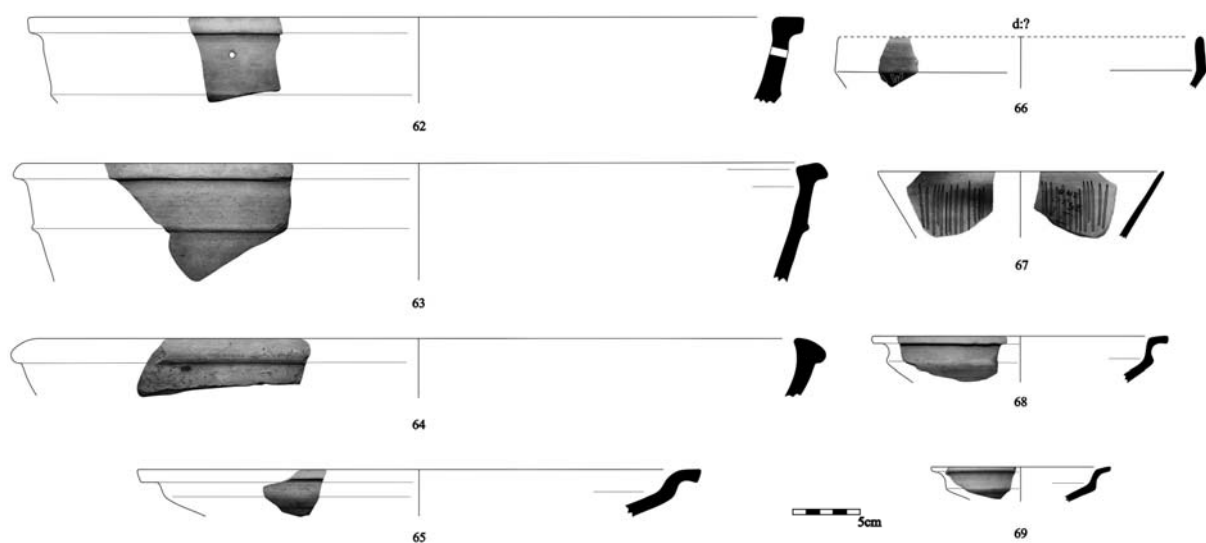


Fig. 24. Pink open forms.

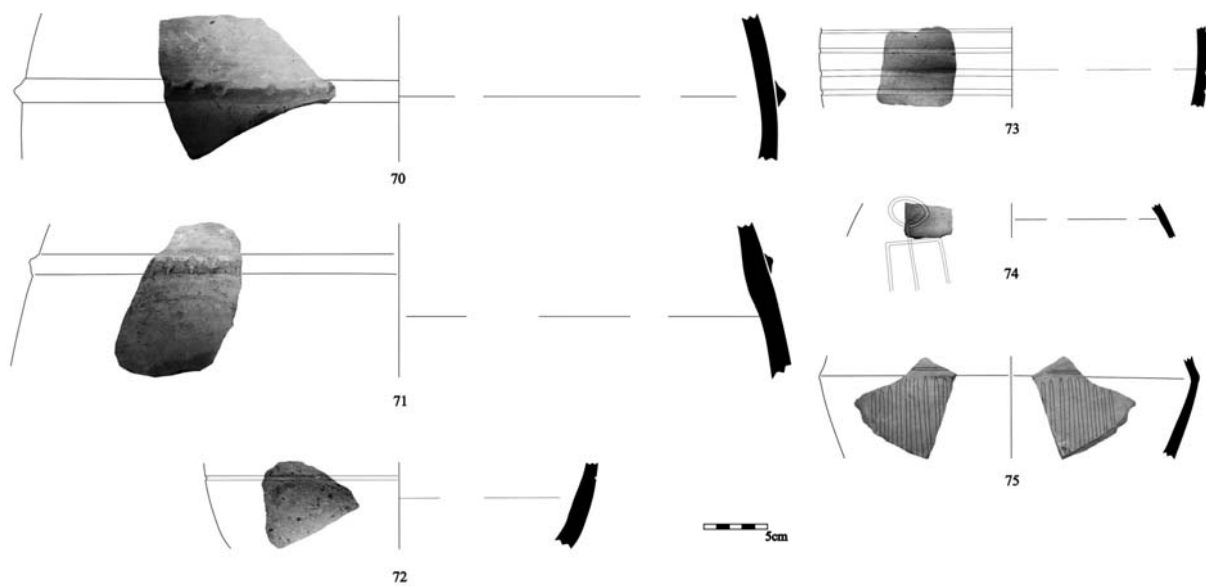


Fig. 25. Pink closed forms and unknown forms.

No. 78: The sample is comparable from a morphological point of view and in form and the external coating colour to examples from Nad Ali.⁷⁸

Unknown Forms (Jug?) (Fig. 25: 72–75)

No. 74: The sample is comparable in decoration to examples from Nad Ali.⁷⁹

Red (Figs 27–28)

Open Forms (Figs 27: 87–90 and 28: 95–97):

No. 88: The sample is comparable from a morphological point of view and in form to examples from the Persepolis plain.⁸⁰

Nos 89, 90: The sample is comparable from a morphological point of view and in form to examples from Nad Ali.⁸¹

No. 95: The sample is comparable from a morphological point of view and in form to examples from Chogha Mish, Nad Ali, and systematic survey of Persepolis.⁸²

No. 97: The sample is comparable from a morphological point of view and in form to examples from Persepolis plain, Tol-e Spid, Miyanab (Shooshtar) plain survey and Narges Tappeh, and from a morphological point of view and in form and the external coating colour to examples from Yahya.⁸³

Closed Forms (Fig. 27: 85–86)

No. 85: The sample is comparable in decoration to examples from Qaleh kali.⁸⁴

Unknown Forms (Jug?) (Figs 27: 91 and 28: 92–94, 101–104)

No. 101: The sample is comparable from a morphological point of view and in form to examples from Tol-e Nurabad.⁸⁵

No. 103: The sample is comparable from a morphological point of view and in form to examples from Tol-e Nurabad.⁸⁶

⁷⁸ Dales 1977, pl. 25, no. 5.

⁷⁹ Ghirshman 1959, fig. G5, the second base and lid.

⁸⁰ Sumner 1986, fig. III 1/M.

⁸¹ Dales 1977, pl. 22, no. 1.

⁸² Alizadeh 2008, fig. 20/L (Chogha Mish); Dales 1977, pl. 22, no. 1 (Nad-Ali); Atai 2004, pl. 92, no. 10 (Persepolis).

⁸³ Sumner 1986, fig. III 2/P (Persepolis); Petrie *et al.* 2006, fig. 4.95, TS 448 (Tol-e Spid); Moghaddam *et al.* 2003, fig. 16, no. 8 (Miyanab); Atai and Abbasi 2009, pl. 1/1 (Narges Tappeh); Karlovsky 1970, fig. 8/Q (Yahya).

⁸⁴ Potts *et al.* 2009, pl. 20/QKC III8.

⁸⁵ Weeks *et al.* 2006, fig. 3.132/TNP 2236.

⁸⁶ Weeks *et al.* 2006, fig. 3.133/TNP 2198.

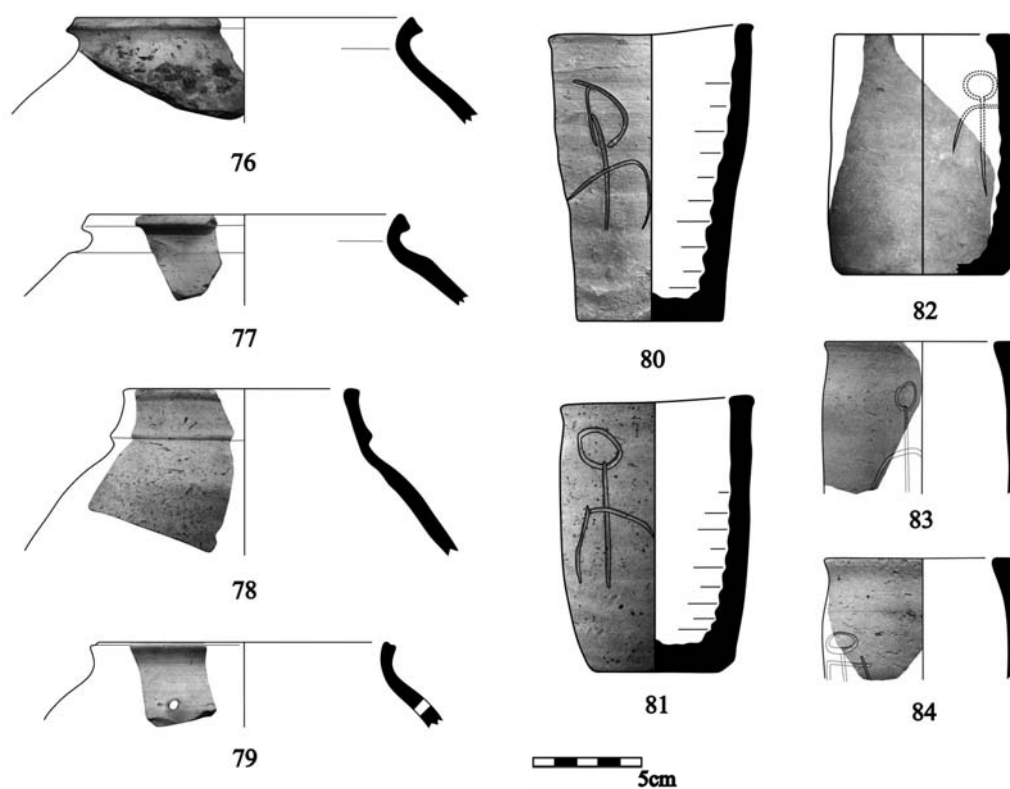


Fig. 26. Pink closed forms and cylinder-shaped vessels.

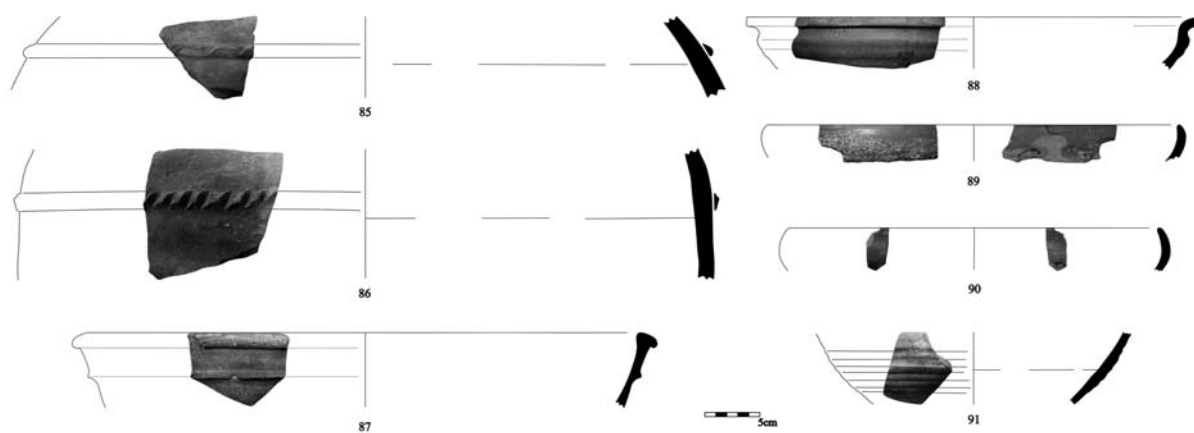


Fig. 27. Red open forms and unknown forms.

Brown (Figs 29–31)*Open Forms (Fig. 29: 105–107)*

No. 105: The sample is comparable from a morphological point of view and in form and the external coating colour to examples from Chogha Mish.⁸⁷

No. 106: The sample is comparable from a morphological point of view and in form to examples from the systematic survey of Persepolis.⁸⁸

Cylinder-shaped vessels (Fig. 30: 114–120, 124–125, and 31: 130–132)

Nos 114, 119: The sample is comparable in decoration to examples from Nad Ali.⁸⁹

Closed Forms (Fig. 29: 108–113, and 31: 129)

No. 108: The sample is comparable from a morphological point of view and in form with examples from the Royal City of Susa II.⁹⁰

No. 109: The sample is comparable from a morphological point of view and in form with example from Yahya.⁹¹

No. 110: The sample is comparable from a morphological point of view and in form and the external coating colour to examples from the systematic survey of Persepolis.⁹²

No. 111: The sample is comparable from a morphological point of view and in form to examples from the Persepolis plain, the Tol-e Spid, Miyanab (Shooshtar) plain survey and Narges Tappeh,⁹³ and from a morphological point of view and in form and the external coating colour with examples from Yahya.⁹⁴

No. 112: The sample is comparable from a morphological point of view and in form and the external coating colour to examples from Yahya.⁹⁵

No. 113: The sample is comparable from a morphological point of view and in form and the external coating colour to examples from Tol-e Spid.⁹⁶

Unknown Forms (Figs 30: 121–123, and 31: 126–128, 133–134)

No. 121: The sample is comparable from a morphological point of view and in form to examples from Teppah Darooqeh (KS 1593).⁹⁷

⁸⁷ Delougaz and Kantor 1996, pl. 74/G.

⁸⁸ Atai 2004, pl. 104, no. 6.

⁸⁹ Ghirshman 1959, Fig. G5, the second base and lid.

⁹⁰ Miroschedji 1987, fig. 15, no. 9.

⁹¹ Karlovsky and Magee 2004, fig. 5.24/c.

⁹² Atai 2004, pl. 38, no. 7.

⁹³ Sumner 1986, fig. III 2/P (Persepolis plain); Petrie *et al.* 2006, fig. 4.95, TS 448 (Tol-e Spid); Moghaddam *et al.* 2003, fig. 16, no. 8 (Miyanab); Atai and Abbasi 2009, pl. 1/1 (Narges Tappeh).

⁹⁴ Karlovsky 1970, Fig. 8/Q.

⁹⁵ Karlovsky 1970, fig. 8/P.

⁹⁶ Petrie *et al.* 2006, fig. 4.95, TS 474.

⁹⁷ Atai 2005b, fig. 104/21.

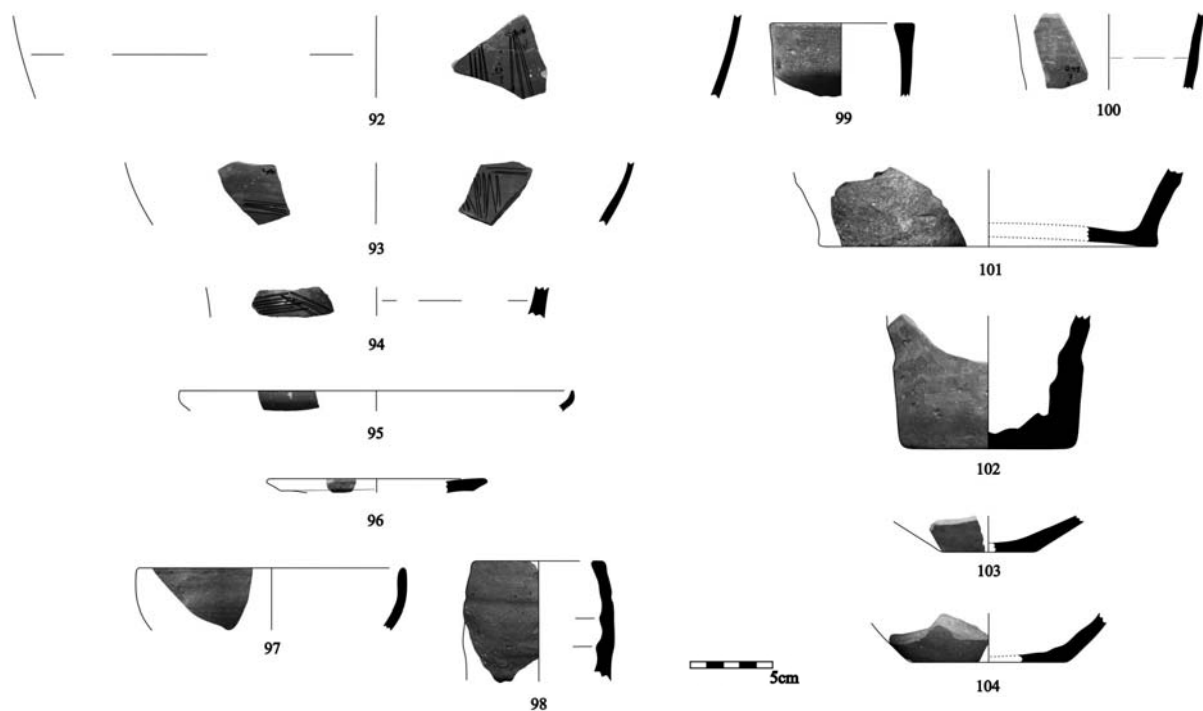


Fig. 28. Red open forms, closed forms and unknown forms.

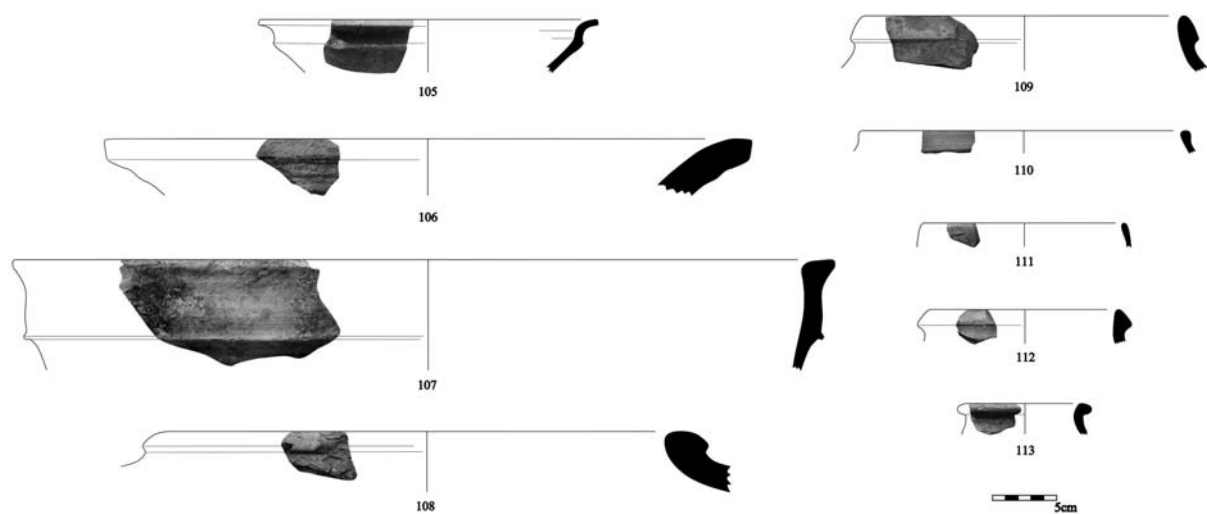


Fig. 29. Brown open forms, closed forms.

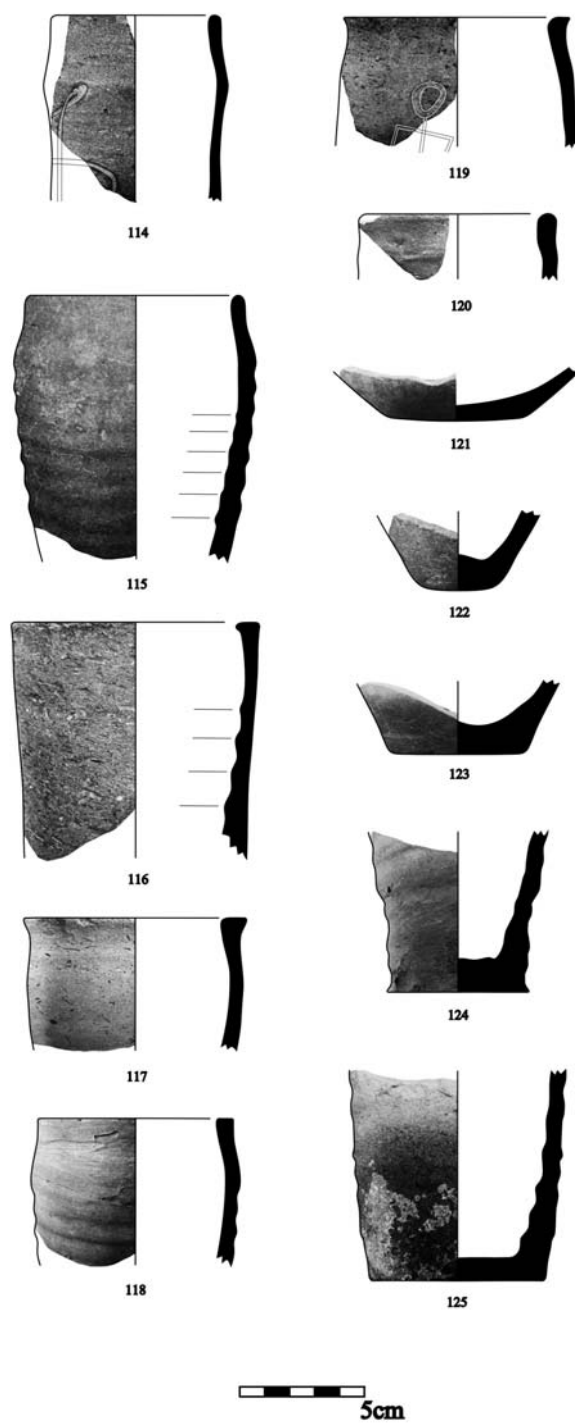


Fig. 30. Brown cylinder-shaped vessels and unknown forms.

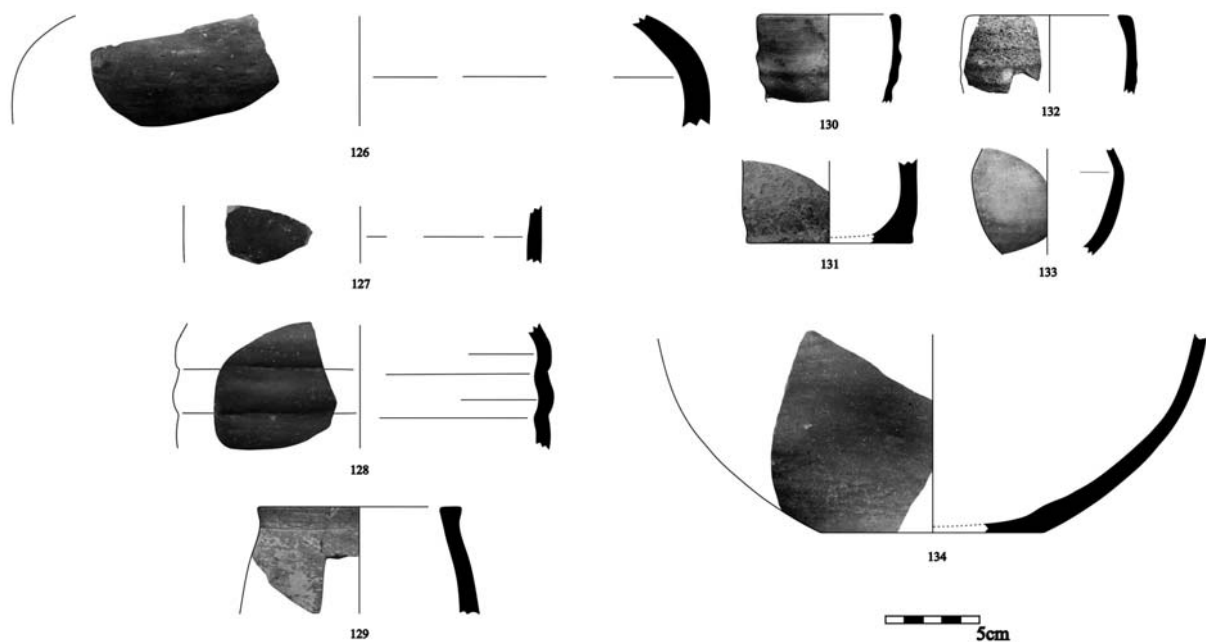


Fig. 31. Brown closed forms and unknown forms.

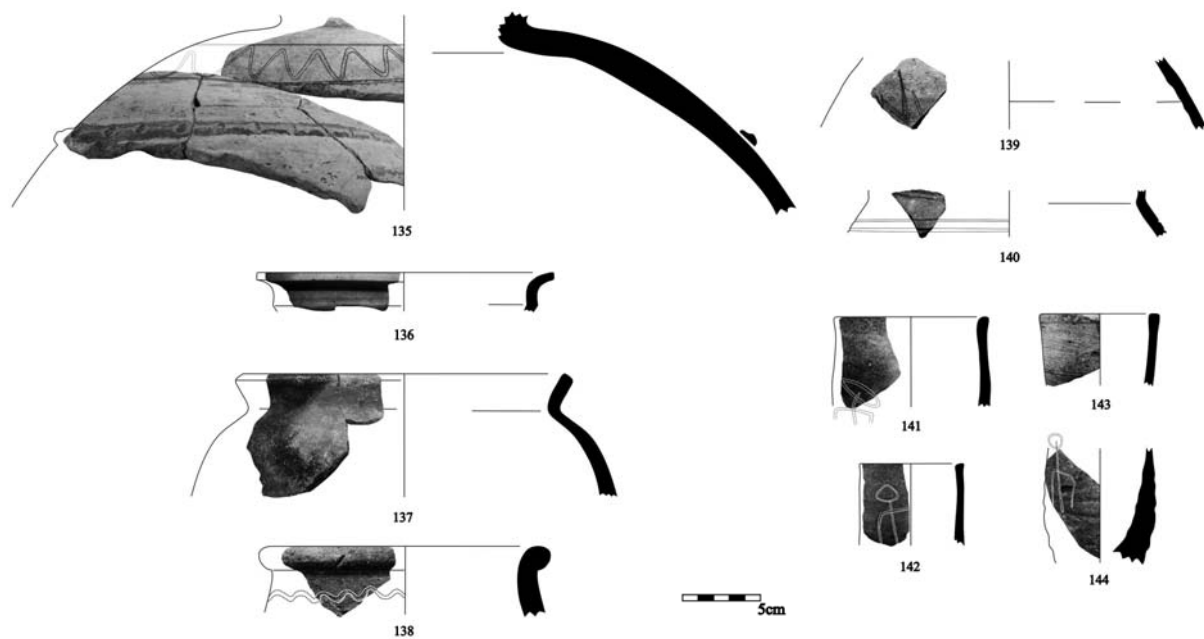


Fig. 32. Grey open forms, closed forms, cylinder-shaped vessels and unknown forms.

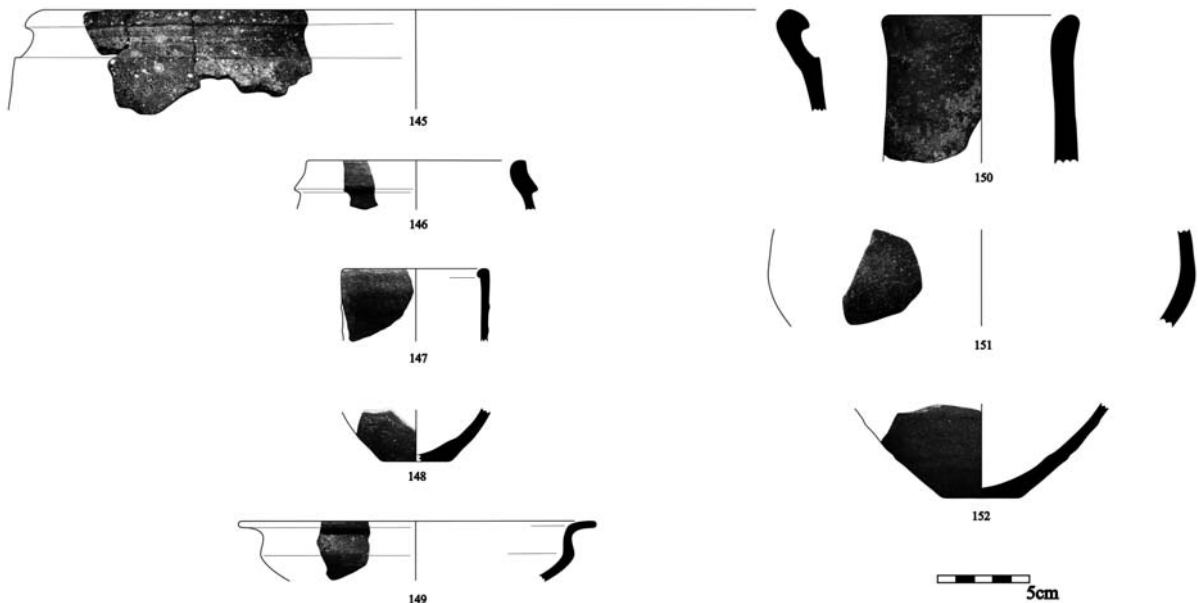


Fig. 33. Black open forms, closed forms, cylinder-shaped vessels and unknown forms.

No. 122: The sample is comparable from a morphological point of view and in form to examples from the Miyanab (Shooshtar) plain surveys.⁹⁸

No. 123: The sample is comparable from a morphological point of view and in form to examples from the Miyanab (Shooshtar) plain surveys.⁹⁹

Grey (Fig. 32)

Cylinder shaped vessels (Fig. 32: 141–144)

Nos 141–144: The sample is comparable in decoration to examples from Nad Ali.¹⁰⁰

Closed Forms (Fig. 32: 136–140)

No. 136: The sample is comparable from a morphological point of view and in form to examples from the Persepolis plain.¹⁰¹

No. 138: The sample is comparable, from a morphological point of view and in form to examples from the systematic survey of Persepolis.¹⁰²

⁹⁸ Atai 2005a, fig. 20/12.

⁹⁹ Atai 2005a, fig. 20/11.

¹⁰⁰ Ghirshman 1959, fig. G5, the second base and lid.

¹⁰¹ Sumner 1986, fig. III 1/L.

¹⁰² Atai 2004, pl. 49, no. 3.

DESCRIPTIONS OF POTTERY

1. Building number. 2. Vessel Form. 3. Core Colour. 4. Internal Colour/ Coating. 5. External Colour/ Coating. 6. Inclusions. 7. Manufacture. 8. Thickness. 9. Firing. 10. Decoration. 11. Diameter.

Fig. 16

- 1- 1. QN.7. 2. Vat. 3. Orange buff. 4. Buff/ Wash. 5. Buff/ Wash. 6. Mica & vegetal. 7. Wheel. 8. 14 mm. 9. Well fired. 10. -. 11. 60 cm.
- 2- 1. QN.6-7. 2. Vat. 3. Orange buff. 4. Buff/ Wash. 5. Buff/ Wash. 6. Mica & vegetal. 7. Wheel. 8. 12 mm. 9. Well fired. 10. -. 11. 58 cm.
- 3- 1. QN.2. 2. Vat. 3. Orange buff. 4. Buff/ Wash. 5. Buff/ Wash. 6. Mica & vegetal. 7. Wheel. 8. 13 mm. 9. Well fired. 10. -. 11. 59 cm.
- 4- 1. QN.2. 2. Vat. 3. Buff brown. 4. Buff/ Wash. 5. Buff/ Wash. 6. White particles. 7. Wheel. 8. 12 mm. 9. Well fired. 10. -. 11. 55 cm.
- 5- 1. QN.6-7. 2. Bowl. 3. Orange buff. 4. Buff/ Wash. 5. Buff/ Wash. 6. White particles & vegetal. 7. Wheel. 8. 11 mm. 9. Well fired. 10. -. 11. 47 cm.
- 6- 1. QN.6-7. 2. Bowl. 3. Orange buff. 4. Buff/ Wash. 5. Buff/ Wash. 6. Mica & vegetal. 7. Wheel. 8. 9 mm. 9. Well fired. 10. -. 11. 45 cm.
- 7- 1. QN.2. 2. Bowl. 3. Orange buff. 4. Light buff/ Wash. 5. Buff/ Wash. 6. Mica, sand, white particles & vegetal. 7. Wheel. 8. 9 mm. 9. Well fired. 10. Incised. 11. 30 cm.

Fig. 17

- 8- 1. QN.2. 2. Bowl. 3. Brown. 4. Light buff/ Wash. 5. Buff/ Wash. 6. Mica & sand. 7. Wheel. 8. 8 mm. 9. Well fired. 10. -. 11. 28 cm.
- 9- 1. QN.15. 2. Bowl. 3. Orange buff. 4. Buff/ Wash. 5. Buff/ Wash. 6. Sand & vegetal. 7. Wheel. 8. 8 mm. 9. Well fired. 10. -. 11. 21 cm.
- 10- 1. QN.16. 2. Bowl. 3. Buff brown. 4. Buff/ Wash. 5. Buff/ Wash. 6. Sand. 7. Wheel. 8. 7 mm. 9. Well fired. 10. -. 11. 19 cm. 12. Smoke.
- 11- 1. QN.2. 2. Bowl. 3. Orange buff. 4. Buff/ Wash. 5. Buff/ Wash. 6. Mica & vegetal. 7. Wheel. 8. 5 mm. 9. Well fired. 10. -. 11. 19 cm.
- 12- 1. QN.15. 2. Bowl. 3. Orange buff. 4. Buff/ Wash. 5. Buff/ Wash. 6. Mica & vegetal. 7. Wheel. 8. 7 mm. 9. Well fired. 10. -. 11. 22 cm.
- 13- 1. QN.2. 2. Bowl. 3. Buff. 4. Buff/ Wash. 5. Buff/ Wash. 6. Mica, sand, white particles & vegetal. 7. Wheel. 8. 4 mm. 9. Well fired. 10. Incised. 11. 13 cm.
- 14- 1. QN.2. 2. Unknown (Bowl?). 3. Orange buff. 4. Light buff/ Slip. 5. Orange buff/ -. 6. Mica & sand. 7. Wheel. 8. 9 mm. 9. Well fired. 10. Incised. 11. 9 cm.

Fig. 18

- 15- 1. QN.2. 2. Jar. 3. Orange buff. 4. Orange buff/ Wash. 5. Buff/ Wash. 6. Vegetal. 7. Wheel. 8. 15 mm. 9. Well fired. 10. -. 11. 49 cm.

- 16- 1. QN.2. 2. Jar. 3. Weak red. 4. Dark grey/ Wash. 5. Buff/ Wash. 6. Grit & vegetal. 7. Wheel. 8. 18 mm. 9. Under-fired. 10. -. 11. 29 cm.
- 17- 1. QN.6. 2. Jar. 3. Dark brown. 4. Buff/ Wash. 5. Buff/ Wash. 6. Grit, sand, white particles & vegetal. 7. Wheel. 8. 18 mm. 9. Under-fired. 10. -. 11. 25 cm.
- 18- 1. QN.2. 2. Jar. 3. Orange buff. 4. Buff brown/ -. 5. Buff/ Wash. 6. Mica, sand & vegetal. 7. Wheel. 8. 15 mm. 9. Well fired. 10. Incised. 11. 25 cm.
- 19- 1. QN.2. 2. Jar. 3. Orange buff. 4. Buff/ Wash. 5. Buff/ Slip. 6. Mica, sand & vegetal. 7. Wheel. 8. 12 mm. 9. Well fired. 10. -. 11. 24 cm.
- 20- 1. QN.2. 2. Jug. 3. Orange buff. 4. Buff/ Wash. 5. Buff/ Wash. 6. Mica, sand & vegetal. 7. Wheel. 8. 15 mm. 9. Well fired. 10. -. 11. 14 cm.

Fig. 19

- 21- 1. QN.7. 2. Jug. 3. Buff. 4. Buff/ Wash. 5. Buff/ Wash. 6. Sand & vegetal. 7. Wheel. 8. 8 mm. 9. Well fired. 10. -. 11. 11 cm.
- 22- 1. QN.2. 2. Jug. 3. Buff. 4. Buff/ Wash. 5. Buff/ Wash. 6. White particles 7. Wheel. 8. 7 mm. 9. Well fired. 10. -. 11. 13 cm.
- 23- 1. QN.2. 2. Jug. 3. Orange buff. 4. Buff/ Wash. 5. Buff/ -. 6. Mica & white particles. 7. Wheel. 8. 8 mm. 9. Well fired. 10. -. 11. 16 cm.
- 24- 1. ?. 2. Jar. 3. Buff. 4. Light buff/ Wash. 5. Buff/ Wash. 6. Mica, sand & white particles. 7. Wheel. 8. 11mm. 9. Well fired. 10. Raised. 11. -.
- 25- 1. QN.2. 2. Jug (?). 3. Orange buff. 4. Orange buff/ -. 5. Buff/ Slip. 6. Mica, sand, white particles & vegetal. 7. Wheel. 8. 9 mm. 9. Well fired. 10. Incised. 11. -.
- 26- 1. QN.2. 2. Jug (?). 3. Orange buff. 4. Orange buff/ Wash. 5. Light buff/ Wash. 6. Mica & vegetal. 7. Wheel. 8. 7 mm. 9. Well fired. 10. Painted. 11. -.
- 27- 1. QN.2. 2. Jug (?). 3. Orange buff. 4. Pale orange / -. 5. Buff/ -. 6. Mica, sand & vegetal. 7. Wheel. 8. 7 mm. 9. Well fired. 10. Incised. 11. -.
- 28- 1. QN.15. 2. Beaker. 3. Orange buff. 4. Light buff / Slip. 5. Light buff / Slip. 6. Mica & sand. 7. Wheel. 8. 8 mm. 9. Well fired. 10. Incised. 11. -.
- 29- 1. QN.15. 2. Beaker. 3. Orange buff. 4. Buff/ Wash. 5. Buff/ Wash. 6. Mica, white particles & sand. 7. Wheel. 8. 9 mm. 9. Well fired. 10. Incised. 11. 8.5 cm.

Fig. 20

- 30- 1. QN.2. 2. Vat. 3. Buff. 4. Light buff/ Wash. 5. Yellowish buff/ Wash. 6. Mica & vegetal. 7. Wheel. 8. 14 mm. 9. Well fired. 10. -. 11. 60 cm.
- 31- 1. QN.2. 2. Vat. 3. Weak red. 4. Buff/ Slip. 5. Yellowish buff/ Slip. 6. Sand & vegetal. 7. Wheel. 8. 15 mm. 9. Well fired. 10. -. 11. 48 cm.
- 32- 1. QN.2. 2. Vat. 3. Buff. 4. Yellowish buff/ Wash. 5. Yellowish buff/ Wash. 6. Sand. 7. Wheel. 8. 10 mm. 9. Well fired. 10. -. 11. 48 cm.
- 33- 1. QN.2. 2. Bowl. 3. Buff. 4. Buff/ Wash. 5. Yellowish buff/ Slip. 6. Sand. 7. Wheel. 8. 8 mm. 9. Well fired. 10. -. 11. 35 cm.
- 34- 1. QN.2. 2. Bowl. 3. Buff. 4. Buff brown/ Wash. 5. Yellowish buff/ Slip. 6. Sand & white particles. 7. Wheel. 8. 8 mm. 9. Well fired. 10. -. 11. 30 cm.

- 35- 1. QN.2. 2. Bowl. 3. Buff brown. 4. Buff brown/ Wash. 5. Yellowish buff/ Wash. 6. Sand & vegetal. 7. Wheel. 8. 8 mm. 9. Well fired. 10. -. 11. 28 cm.
- 36- 1. QN.2. 2. Bowl. 3. Buff. 4. Buff/ Wash. 5. Yellowish buff/ Wash. 6. Sand & white particles. 7. Wheel. 8. 4 mm. 9. Well fired. 10. -. 11. 19 cm.
- 37- 1. QN.2. 2. Bowl. 3. Buff. 4. Light buff/ Wash. 5. Yellowish buff/ Wash. 6. Sand, mica & white particles. 7. Wheel. 8. 5 mm. 9. Well fired. 10. -. 11. 12 cm.

Fig. 21

- 38- 1. QN.2. 2. Jar. 3. Black. 4. Dark grey/ Wash. 5. Yellowish buff/ Slip. 6. Sand, mica, grit & vegetal. 7. Wheel. 8. 14 mm. 9. Under-fired. 10. -. 11. 28 cm.
- 39- 1. QN.2. 2. Jar. 3. Weak red. 4. Yellowish buff/ Slip. 5. Yellowish buff/ Slip. 6. Sand, mica & vegetal. 7. Wheel. 8. 16 mm. 9. Well fired. 10. -. 11. 42 cm.
- 40- 1. QN.2. 2. Jar. 3. Weak red. 4. Yellowish buff/ Slip. 5. Yellowish buff/ Slip. 6. Sand, grit, white particles & vegetal. 7. Wheel. 8. 15 mm. 9. Well fired. 10. -. 11. 39 cm.
- 41- 1. QN.2. 2. Jar. 3. Weak red. 4. Dark red/ Wash. 5. Yellowish buff/ Slip. 6. Sand, grit, white particles & vegetal. 7. Wheel. 8. 19 mm. 9. Well fired. 10. -. 11. 25 cm.
- 42- 1. QN.2. 2. Jar. 3. Light brownish grey. 4. Light buff/ Wash. 5. Yellowish buff/ Wash. 6. Sand & vegetal. 7. Wheel. 8. 12 mm. 9. Well fired. 10. -. 11. 21 cm.
- 43- 1. QN.2. 2. Jug. 3. Weak red. 4. Buff/ Wash. 5. Yellowish buff/ Wash. 6. Mica, sand & vegetal. 7. Wheel. 8. 11 mm. 9. Well fired. 10. -. 11. 11 cm.

Fig. 22

- 44- 1. QN.23. 2. Jug. 3. Orange buff. 4. Orange buff/ Wash. 5. Yellowish buff/ Slip. 6. Mica & vegetal. 7. Wheel. 8. 7 mm. 9. Well fired. 10. -. 11. 9 cm.
- 45- 1. QN.2. 2. Jug. 3. Buff. 4. Buff/ Wash. 5. Yellowish buff/ Wash. 6. Sand & vegetal. 7. Wheel. 8. 10 mm. 9. Well fired. 10. -. 11. 10 cm.
- 46- 1. QN.2. 2. Jug. 3. Buff. 4. Yellowish buff/ Slip. 5. Yellowish buff/ Slip. 6. Sand. 7. Wheel. 8. 4 mm. 9. Well fired. 10. -. 11. 10 cm.
- 47- 1. QN.23. 2. Beaker. 3. Orange buff. 4. Orange buff/ -. 5. Yellowish buff/ Slip. 6. Sand & mica. 7. Wheel. 8. 6 mm. 9. Well fired. 10. Incised. 11. 9 cm.
- 48- 1. QN.23. 2. Beaker. 3. Orange buff. 4. Yellowish buff/ Slip. 5. Yellowish buff/ Slip. 6. Sand & mica. 7. Wheel. 8. 5 mm. 9. Well fired. 10. Incised. 11. 8 cm.
- 49- 1. QN.23. 2. Beaker. 3. Orange buff. 4. Orange buff/ -. 5. Yellowish buff/ Slip. 6. Sand & mica. 7. Wheel. 8. 5 mm. 9. Well fired. 10. Incised. 11. 8.5 cm.
- 50- 1. ?. 2. Beaker. 3. Orange buff. 4. Orange buff/ -. 5. Yellowish buff/ Slip. 6. Sand & mica. 7. Wheel. 8. 6 mm. 9. Well fired. 10. Incised. 11.- cm.
- 51- 1. ?. 2. Beaker. 3. Orange buff. 4. Orange buff/ -. 5. Yellowish buff/ Slip. 6. Sand & white particles. 7. Wheel. 8. 9 mm. 9. Well fired. 10. Incised. 11.-.
- 52- 1. ?. 2. Beaker. 3. Buff. 4. Yellowish buff/ Slip. 5. Yellowish buff/ Slip. 6. Sand & mica. 7. Wheel. 8. 10 mm. 9. Well fired. 10. Incised. 11. 8.5 cm.
- 53- 1. ?. 2. Beaker. 3. Orange buff. 4. Yellowish buff/ Slip. 5. Yellowish buff/ Slip. 6. Sand, mica & vegetal. 7. Wheel. 8. 8 mm. 9. Well fired. 10. Incised. 11. 9 cm.

Fig. 23

- 54- 1. QN.2. 2. Bowl. 3. Brown. 4. Brownish red/ Wash. 5. Orange buff/ Wash. 6. Sand & mica. 7. Wheel. 8. 10 mm. 9. Well fired. 10. -. 11. 32 cm. 12. Burnished.
- 55- 1. QN.2. 2. Bowl. 3. Orange buff. 4. Orange buff/ Wash. 5. Orange buff/ Wash. 6. Sand, mica & vegetal. 7. Wheel. 8. 7 mm. 9. Well fired. 10. -. 11. 30 cm. 12. Burnished.
- 56- 1. QN.2. 2. Jug. 3. Orange. 4. Orange buff/ Wash. 5. Orange buff/ Wash. 6. Sand. 7. Wheel. 8. 5 mm. 9. Well fired. 10. -. 11. 12 cm.
- 57- 1. QN.2. 2. Jug. 3. Brownish red. 4. Orange buff/ Wash. 5. Orange buff/ Wash. 6. Sand & white particles. 7. Wheel. 8. 6 mm. 9. Well fired. 10. -. 11. 14 cm.
- 58- 1. ?. 2. Jug. 3. Buff. 4. Orange buff/ Slip. 5. Orange buff/ Slip. 6. Sand. 7. Wheel. 8. 7 mm. 9. Well fired. 10. -. 11. 10 cm.
- 59- 1. QN.1. 2. Jug. 3. Orange buff. 4. Pinkish buff/ Wash. 5. Orange buff/ Slip. 6. Sand, mica & vegetal. 7. Wheel. 8. 11 mm. 9. Well fired. 10. -. 11. 11 cm.
- 60- 1. QN.2. 2. Jug (?). 3. Orange. 4. Orange/ Wash. 5. Orange buff/ Wash. 6. Sand, mica & vegetal. 7. Wheel. 8. 9 mm. 9. Well fired. 10. Incised. 11. -.
- 61- 1. QN.2. 2. Jar (?). 3. Orange buff. 4. Pale orange/ -. 5. Orange buff/ Wash. 6. Sand, mica & vegetal. 7. Wheel. 8. 12 mm. 9. Well fired. 10. Raised. 11. -.

Fig. 24

- 62- 1. QN.15. 2. Vat 3. Orange. 4. Buff/ -. 5. Orange pink/ Wash. 6. Mica. 7. Wheel. 8. 14 mm. 9. Well fired. 10. -. 11. 59 cm.
- 63- 1. QN.2. 2. Vat 3. Pink. 4. Buff brown/ Wash. 5. Orange pink/ Wash. 6. Sand & vegetal. 7. Wheel. 8. 11 mm. 9. Well fired. 10. -. 11. 62 cm.
- 64- 1. QN.2. 2. Vat 3. Pink. 4. Buff brown/ Wash. 5. Orange pink/ Wash. 6. Sand, mica, grit & vegetal. 7. Wheel. 8. 12 mm. 9. Well fired. 10. -. 11. 59 cm.
- 65- 1. QN.2. 2. Bowl 3. Orange. 4. Orange pink/ Wash. 5. Orange pink/ Wash. 6. Sand. 7. Wheel. 8. 11 mm. 9. Well fired. 10. -. 11. 44 cm.
- 66- 1. QN.2. 2. Bowl 3. Orange. 4. Orange / Wash. 5. Pink/ Wash. 6. Sand & mica. 7. Wheel. 8. 6 mm. 9. Well fired. 10. -. 11. ?. 12. Burnished.
- 67- 1. QN.2. 2. Bowl 3. Orange buff. 4. Orange buff/ Wash. 5. Pink/ Wash. 6. Sand & white particles. 7. Wheel. 8. 4 mm. 9. Well fired. 10. -. 11. 22 cm. 12. Burnished.
- 68- 1. QN.2. 2. Bowl 3. Orange. 4. Orange pink/ Wash. 5. Orange pink/ Wash. 6. Sand, mica & white particles. 7. Wheel. 8. 5 mm. 9. Well fired. 10. -. 11. 23 cm.
- 69- 1. QN.2. 2. Bowl 3. Orange. 4. Orange pink/ Wash. 5. Orange pink/ Wash. 6. Sand, mica & white particles. 7. Wheel. 8. 4 mm. 9. Well fired. 10. -. 11. 14 cm.

Fig. 25

- 70- 1. QN.2. 2. Jar (?) 3. Orange buff. 4. Orange buff/ Wash. 5. Pinkish buff/ Slip. 6. Sand, mica & vegetal. 7. Wheel. 8. 14 mm. 9. Well fired. 10. Raised. 11. -.
- 71- 1. QN.2. 2. Jar (?) 3. Orange. 4. Orange buff/ Wash. 5. Pink/ Slip. 6. Sand, mica & vegetal. 7. Wheel. 8. 19 mm. 9. Well fired. 10. Raised. 11. -.

- 72- 1. QN.2. 2. Jug (?) 3. Weak red. 4. Pink/ Wash. 5. Pink/ Wash. 6. Sand, grit, white particles & vegetal. 7. Wheel. 8. 12 mm. 9. Well fired. 10. Incised. 11. -.
- 73- 1. QN.2. 2. Jug (?) 3. Orange buff. 4. Pinkish buff/ Wash. 5. Pink/ Wash. 6. Sand & mica. 7. Wheel. 8. 8 mm. 9. Well fired. 10. Incised. 11. -.
- 74- 1. QN.6. 2. Jug (?) 3. Orange buff. 4. Light buff/ Wash. 5. Pink/ Wash. 6. Sand. 7. Wheel. 8. 6 mm. 9. Well fired. 10. Incised. 11. -.
- 75- 1. QN.2. 2. Bowl (?). 3. Orange buff. 4. Orange pink/ Wash. 5. Orange pink/ Wash. 6. Sand, mica & vegetal. 7. Wheel. 8. 7 mm. 9. Well fired. 10. -. 11. -. 12. Burnished.

Fig. 26

- 76- 1. QN.2. 2. Jug. 3. Orange buff. 4. Buff brown/ Wash. 5. Pinkish buff/ Wash. 6. Mica & vegetal. 7. Wheel. 8. 6 mm. 9. Well fired. 10. -. 11. 15 cm.
- 77- 1. QN.2. 2. Jug. 3. Orange buff. 4. Buff brown/ Wash. 5. Pinkish buff/ Wash. 6. Mica, sand & grit. 7. Wheel. 8. 7 mm. 9. Well fired. 10. -. 11. 15 cm.
- 78- 1. ?. 2. Jug. 3. Buff brown. 4. Buff/ Slip. 5. Pinkish buff/ Slip. 6. Mica, sand & vegetal. 7. Wheel. 8. 5 mm. 9. Well fired. 10. -. 11. 10 cm.
- 79- 1. QN.2. 2. Jug. 3. Brownish red. 4. Pink/ Slip. 5. Pinkish buff/ Slip. 6. Sand & white particles. 7. Wheel. 8. 5 mm. 9. Well fired. 10. -. 11. 14 cm.
- 80- 1. ?. 2. Beaker. 3. Orange buff. 4. Pinkish buff/ Wash. 5. Pinkish buff/ Wash. 6. Sand & mica. 7. Wheel. 8. 7 mm. 9. Well fired. 10. Incised. 11. 9.5 cm.
- 81- 1. ?. 2. Beaker. 3. Pinkish brown. 4. Pink/ Wash. 5. Pinkish buff/ Slip. 6. Sand & mica. 7. Wheel. 8. 10 mm. 9. Well fired. 10. Incised. 11. 9 cm.
- 82- 1. QN.6. 2. Beaker. 3. Pink. 4. Pinkish buff/ Wash. 5. Pinkish buff/ Wash. 6. Sand, white particles & vegetal. 7. Wheel. 8. 6 mm. 9. Well fired. 10. Incised. 11. 8 cm.
- 83- 1.?. 2. Beaker. 3. Pink. 4. Pinkish buff/ Slip. 5. Pinkish buff/ Slip. 6. Sand, mica, white particles & vegetal. 7. Wheel. 8. 6 mm. 9. Well fired. 10. Incised. 11. 9 cm.
- 84- 1. QN.23. 2. Beaker. 3. Orange buff. 4. Pink/ Wash. 5. Pinkish buff/ Wash. 6. White particles & vegetal. 7. Wheel. 8. 6 mm. 9. Well fired. 10. Incised. 11. 9 cm.

Fig. 27

- 85- 1. QN.2. 2. Jar (?). 3. Orange. 4. Pale orange/ Wash. 5. Weak red/ Slip. 6. Mica, sand & vegetal. 7. Wheel. 8. 16 mm. 9. Well fired. 10. Raised. 11. -.
- 86- 1. QN.15. 2. Jar (?). 3. Weak red. 4. Brown/ Wash. 5. Weak red/ Slip. 6. Mica, sand & vegetal. 7. Wheel. 8. 17 mm. 9. Under-fired. 10. Raised. 11. -.
- 87- 1. QN.6-7. 2. Vat. 3. Orange. 4. Weak red/ Wash. 5. Weak red/ Wash. 6. Mica. 7. Wheel. 8. 9 mm. 9. Well fired. 10. -. 11. 54 cm.
- 88- 1. QN.6. 2. Bowl. 3. Orange. 4. Light buff/ Wash. 5. Weak red/ Wash. 6. Mica & vegetal. 7. Wheel. 8. 9 mm. 9. Well fired. 10. -. 11. 44 cm.
- 89- 1. QN.2. 2. Bowl. 3. Orange buff. 4. Red/ Slip. 5. Red/ Slip. 6. Mica & sand. 7. Wheel. 8. 7 mm. 9. Well fired. 10. -. 11. 40 cm. 12. Smoothed.
- 90- 1. QN.2. 2. Bowl. 3. Orange buff. 4. Red/ Slip. 5. Red/ Slip. 6. Mica & sand. 7. Wheel. 8. 7 mm. 9. Well fired. 10. -. 11. 36 cm. 12. Smoothed.

- 91- 1. QN.6-7. 2. ?. 3. Pink. 4. Light buff/ Wash. 5. Weak red/ Wash. 6. Mica, sand, white particles & vegetal. 7. Wheel. 8. 9 mm. 9. Well fired. 10. -. 11. -.

Fig. 28

- 92- 1. QN.6. 2. ?. 3. Orange. 4. Red/ Slip. 5. Red/ Slip. 6. Mica & sand. 7. Wheel. 8. 4 mm. 9. Well fired. 10. -. 11. -. 12. Burnished.
- 93- 1. QN.2. 2. ?. 3. Orange buff. 4. Red/ Slip. 5. Red/ Slip. 6. Sand. 7. Wheel. 8. 4 mm. 9. Well fired. 10. -. 11. -. 12. Burnished.
- 94- 1. QN.2. 2. ?. 3. Orange. 4. Red/ Slip. 5. Red/ Slip. 6. Mica & sand. 7. Wheel. 8. 9 mm. 9. Well fired. 10. -. 11. -. 12. Burnished.
- 95- 1. QN.2. 2. Bowl. 3. Orange buff. 4. Red/ Slip. 5. Red/ Slip. 6. Sand. 7. Wheel. 8. 3 mm. 9. Well fired. 10. -. 11. 25 cm. 12. Smoothed.
- 96- 1. QN.2. 2. Bowl (?). 3. Orange buff. 4. Red/ Slip. 5. Red/ Slip. 6. Mica & sand. 7. Wheel. 8. 7 mm. 9. Well fired. 10. -. 11. 14 cm. 12. Smoothed.
- 97- 1. QN.2. 2. Bowl. 3. Orange buff. 4. Pale orange/ Wash. 5. Weak red/ Wash. 6. Mica, sand & vegetal. 7. Wheel. 8. 6 mm. 9. Well fired. 10. -. 11. 17 cm.
- 98- 1. QN.2. 2. Beaker. 3. Orange. 4. Orange/ Wash. 5. Weak red/ Wash. 6. Mica, sand, white particles & vegetal. 7. Wheel. 8. 7 mm. 9. Well fired. 10. -. 11. 8 cm.
- 99- 1. QN.2. 2. Beaker. 3. Orange buff. 4. Weak red / Wash. 5. Weak red/ Wash. 6. Mica, sand & vegetal. 7. Wheel. 8. 7 mm. 9. Well fired. 10. -. 11. 9 cm.
- 100- 1. QN.2. 2. ?. 3. Orange buff. 4. Red/ Slip. 5. Red/ Slip. 6. Mica & sand. 7. Wheel. 8. 6 mm. 9. Well fired. 10. -. 11. -.
- 101- 1. QN.2. 2. ?. 3. Weak red. 4. Buff brown/ Wash. 5. Weak red/ -. 6. Sand, white particles & vegetal. 7. Wheel. 8. 6 mm. 9. Well fired. 10. -. 11. 21 cm.
- 102- 1. QN.2. 2. ?. 3. Orange buff. 4. Orange buff/ Wash. 5. Weak red/ Wash. 6. Mica, sand, white particles. 7. Wheel. 8. 15 mm. 9. Well fired. 10. -. 11. 11 cm.
- 103- 1. QN.4. 2. ?. 3. Orange buff. 4. Orange buff/ Slip. 5. Weak red/ Slip. 6. Sand & white particles. 7. Wheel. 8. 9 mm. 9. Well fired. 10. -. 11. 6 cm.
- 104- 1. QN.2. 2. ?. 3. Orange. 4. Orange/ Wash. 5. Red/ Slip. 6. Sand, mica & white particles. 7. Wheel. 8. 9 mm. 9. Well fired. 10. -. 11. 10 cm.

Fig. 29

- 105- 1. QN.4. 2. Bowl. 3. Dark brown. 4. Light brownish grey/ Slip. 5. Buff brown/ Slip. 6. Sand & white particles. 7. Wheel. 8. 6 mm. 9. Well fired. 10. -. 11. 27 cm.
- 106- 1. QN.6-7. 2. Jar (?). 3. Weak red. 4. Pale orange/ Wash. 5. Buff brown/ Wash. 6. Sand & vegetal. 7. Wheel. 8. 20 mm. 9. Well fired. 10. -. 11. 52 cm.
- 107- 1. QN.2. 2. Vat. 3. Brownish red. 4. Orange buff/ Wash. 5. Buff brown/ Wash. 6. Sand & mica. 7. Wheel. 8. 15 mm. 9. Well fired. 10. -. 11. 65 cm. 12. Smoke.
- 108- 1. ?. 2. Jar. 3. Dark brown. 4. Buff brown/ Wash. 5. Buff brown/ Wash. 6. Sand, mica & vegetal. 7. Wheel. 8. 20 mm. 9. Under-fired. 10. -. 11. 42 cm.
- 109- 1. QN.2. 2. Jug. 3. Light brownish grey. 4. Buff/ Wash. 5. Light brown/ Slip. 6. Sand. 7. Wheel. 8. 10 mm. 9. Well fired. 10. -. 11. 26 cm.

- 110- 1. QN.2. 2. Jug. 3. Orange buff. 4. Light brownish grey/ Wash. 5. Light brown/ Wash. 6. Sand. 7. Wheel. 8. 5 mm. 9. Well fired. 10. -. 11. 26 cm.
- 111- 1. ?. 2. Jug or Bowl. 3. Orange buff. 4. Buff brown/ Wash. 5. Buff brown/ Wash. 6. Sand. 7. Wheel. 8. 4 mm. 9. Well fired. 10. -. 11. 16 cm.
- 112- 1. QN.2. 2. Jug. 3. Pale grey. 4. Light brown/ Wash. 5. Light brown/ Wash. 6. Mica & vegetal. 7. Wheel. 8. 9 mm. 9. Well fired. 10. -. 11. 15 cm.
- 113- 1. QN.6-7. 2. Jug. 3. Weak red. 4. Buff brown/ Wash. 5. Buff brown/ Wash. 6. White particles & vegetal. 7. Wheel. 8. 6 mm. 9. Well fired. 10. -. 11. 10 cm.

Fig. 30

- 114- 1. QN.23. 2. Beaker. 3. Dark grey. 4. Brown/ Slip. 5. Brown/ Slip. 6. Sand & white particles. 7. Wheel. 8. 5 mm. 9. Under-fired. 10. Incised. 11. 6.5 cm.
- 115- 1. QN.23. 2. Beaker. 3. Orange buff. 4. Light buff/ Wash. 5. Buff brown/ -. 6. Sand. 7. Wheel. 8. 7 mm. 9. Well fired. 10.--. 11. 8 cm.
- 116- 1. QN.23. 2. Beaker. 3. Buff brown. 4. Light buff/ Wash. 5. Buff brown/ -. 6. Sand. 7. Wheel. 8. 6 mm. 9. Well fired. 10. -. 11. 10 cm.
- 117- 1. QN.23. 2. Beaker. 3. Grey. 4. Grey/ -. 5. Light brown/ -. 6. Sand, mica & white particles. 7. Wheel. 8. 7 mm. 9. Well fired. 10. -. 11. 9 cm.
- 118- 1. QN.2. 2. Beaker. 3. Orange buff. 4. Light buff / Wash. 5. Greyish brown/ Wash. 6. Sand, mica & white particles. 7. Wheel. 8. 7 mm. 9. Well fired. 10. -. 11. 8 cm.
- 119- 1. QN.23. 2. Beaker. 3. Pale grey. 4. Light brownish grey/ Wash. 5. Buff brown/ Slip. 6. Sand & white particles. 7. Wheel. 8. 5 mm. 9. Well fired. 10. Incised. 11. 9 cm.
- 120- 1. QN.2. 2. Beaker. 3. Orange buff. 4. Buff / Wash. 5. Light brown/ Wash. 6. Sand, mica & white particles. 7. Wheel. 8. 7 mm. 9. Well fired. 10. -. 11. 8 cm.
- 121- 1. QN.15. 2. ?. 3. Buff brown. 4. Buff brown/ Wash. 5. Buff brown/ Wash. 6. Sand, mica & white particles. 7. Wheel. 8. 6 mm. 9. Well fired. 10. -. 11. 6 cm.
- 122- 1. QN.6. 2. ?. 3. Light brownish grey. 4. Light brownish grey / -. 5. Buff brown/ Wash. 6. Sand. 7. Wheel. 8. 6 mm. 9. Well fired. 10. -. 11. 3 cm.
- 123- 1. QN.6-7. 2. ?. 3. Buff. 4. Buff/ -. 5. Buff brown/ Wash. 6. Sand. 7. Wheel. 8. 7 mm. 9. Well fired. 10. -. 11. 6 cm.
- 124- 1. QN.2. 2. Beaker. 3. Orange buff. 4. Light buff/ Wash. 5. Greyish brown/ Wash. 6. Sand & white particles. 7. Wheel. 8. 7 mm. 9. Well fired. 10. -. 11. 6 cm.
- 125- 1. ?. 2. Beaker (?). 3. Dark brown. 4. Buff brown/ Wash. 5. Buff brown/ Wash. 6. Sand & white particles. 7. Wheel. 8. 7 mm. 9. Well fired. 10. -. 11. 7cm.

Fig. 31

- 126- 1. QN.2. 2. ?. 3. Orange buff. 4. Orange buff/ -. 5. Brownish red/ Slip. 6. Sand & mica. 7. Wheel. 8. 12 mm. 9. Well fired. 10. -. 11. -. 12. Smoothed.
- 127- 1. QN.6. 2. ?. 3. Buff. 4. Brownish red/ Slip. 5. Brownish red/ Slip. 6. Sand. 7. Wheel. 8. 7 mm. 9. Well fired. 10. -. 11. -. 12. Smoothed.
- 128- 1. QN.2. 2. ?. 3. Orange buff. 4. Orange buff/ -. 5. Brownish red/ Slip. 6. Sand & mica. 7. Wheel. 8. 8 mm. 9. Well fired. 10. -. 11. -. 12. Smoothed.

- 129- 1. QN.2. 2. Jug. 3. Dark reddish brown. 4. Dark brown/ Wash. 5. Buff brown/ Slip. 6. White particles & vegetal. 7. Wheel. 8. 9mm. 9. Well fired. 10. -. 11. 9 cm.
- 130- 1. ?. 2. Beaker. 3. Pale grey. 4. Buff brown/ Slip. 5. Brown/ Slip. 6. White particles. 7. Wheel. 8. 5 mm. 9. Well fired. 10. -. 11. 6 cm.
- 131- 1. QN.6. 2. Beaker. 3. Dark red. 4. Buff/ Slip. 5. Brown/ Slip. 6. White particles & mica. 7. Wheel. 8. 11 mm. 9. Well fired. 10. -. 11. 9 cm.
- 132- 1. QN.2. 2. Beaker. 3. Grey. 4. Buff brown/ Wash. 5. Buff brown/ Wash. 6. Sand & white particles. 7. Wheel. 8. 8 mm. 9. Well fired. 10. -. 11. 7 cm.
- 133- 1. QN.2. 2. ?. 3. Orange buff. 4. Buff brown/ Wash. 5. Buff brown/ Wash. 6. Sand & mica. 7. Wheel. 8. 6 mm. 9. Well fired. 10. -. 11. -.
- 134- 1. QN.6. 2. ?. 3. Orange buff. 4. Brown/ -. 5. Orange buff/ Slip. 6. Sand, mica & white particles. 7. Wheel. 8. 10 mm. 9. Well fired. 10. -. 11. 12 cm. 12. Smoothed.

Fig. 32

- 135- 1. QN.2. 2. Jar. 3. Buff. 4. Dark greenish brown/ Slip. 5. Greyish brown/ Slip. 6. Sand, mica, white particles & vegetal. 7. Wheel. 8. 17 mm. 9. Under-fired. 10. Mixed (incised & raised). 11. -.
- 136- 1. QN.6. 2. Bowl. 3. Black. 4. Pale grey/ Wash. 5. Pale grey/ Wash. 6. Sand. 7. Wheel. 8. 7 mm. 9. Under-fired. 10. -. 11. 20 cm.
- 137- 1. QN.2. 2. Jug. 3. Buff. 4. Pale grey/ Wash. 5. Pale grey/ Wash. 6. Sand & grit. 7. Hand made (?). 8. 10 mm. 9. Under-fired. 10. -. 11. 22 cm. 12. Smoke.
- 138- 1. QN.3. 2. Jug. 3. Buff. 4. Dark grey/ -. 5. Dark grey/ -. 6. Sand & vegetal. 7. Wheel. 8. 15 mm. 9. Under-fired. 10. Incised. 11. 18 cm.
- 139- 1. QN.2. 2. Jug (?). 3. Buff brown. 4. Dark grey/ -. 5. Dark grey/ -. 6. Sand, white particles & vegetal. 7. Wheel. 8. 6 mm. 9. Under-fired. 10. Incised. 11. -.
- 140- 1. QN.2. 2. Jug (?). 3. Pale grey. 4. Dark grey/ -. 5. Dark grey/ -. 6. Sand, mica & white particles. 7. Wheel. 8. 6 mm. 9. Under-fired. 10. Incised. 11. -.
- 141- 1. QN.23. 2. Beaker. 3. Black. 4. Pale grey/ -. 5. Dark grey/ -. 6. Sand & white particles. 7. Wheel. 8. 4 mm. 9. Well fired. 10. Incised. 11. 10 cm.
- 142- 1. ?. 2. Beaker. 3. Black. 4. Pale grey/ -. 5. Grey/ -. 6. Sand & white particles. 7. Wheel. 8. 4 mm. 9. Well fired. 10. Incised. 11. 6.5 cm.
- 143- 1. QN.23. 2. Beaker. 3. Black. 4. Greenish grey/Slip. 5. Pale grey/ Slip. 6. Sand. 7. Wheel. 8. 5 mm. 9. Well fired. 10. -. 11. 8 cm.
- 144- 1. ?. 2. Beaker. 3. Dark grey. 4. Dark grey/ Wash. 5. Dark grey/ Wash. 6. Sand, mica, white particles & vegetal. 7. Wheel. 8. 7 mm. 9. Well fired. 10. Incised. 11. -.

Fig. 33

- 145- 1. QN. 6-7. 2. Jug. 3. Black. 4. Dark grey/ -. 5. Dark grey/ -. 6. Sand, grit & white particles. 7. Wheel. 8. 9 mm. 9. Well fired. 10. -. 11. 42 cm.
- 146- 1. QN.3. 2. Jug. 3. Dark grey. 4. Dark grey/ -. 5. Dark grey/ -. 6. Sand & white particles. 7. Wheel. 8. 5 mm. 9. Well fired. 10. -. 11. 12 cm.

- 147- 1. QN.6. 2. Beaker. 3. Grey. 4. Dark grey/ -. 5. Dark grey/ -. 6. Sand, white particles & vegetal. 7. Wheel. 8. 9 mm. 9. Well fired. 10. -. 11. 8 cm.
- 148- 1. QN.6. 2. ?. 3. Pale grey. 4. Dark grey/ -. 5. Dark grey/ -. 6. Sand. 7. Wheel. 8. 7 mm. 9. Well fired. 10. -. 11. 4 cm.
- 149- 1. ?. 2. Bowl. 3. Black. 4. Black/ -. 5. Black/ -. 6. Sand & mica. 7. Wheel. 8. 5 mm. 9. Well fired. 10. -. 11. 20 cm.
- 150- 1. QN.2. 2. Jug (?). 3. Black. 4. Light brownish grey/ Wash. 5. Black/ Wash. 6. Sand & vegetal. 7. Wheel. 8. 12 mm. 9. Well fired. 10. -. 11. 10 cm.
- 151- 1. QN.2. 2. ?. 3. Light brownish grey. 4. Light brownish grey/ Wash. 5. Black/ Wash. 6. Sand & grit. 7. Wheel. 8. 7 mm. 9. Well fired. 10. -. 11. -.
- 152- 1. ?. 2. ?. 3. Buff brown. 4. Light buff/ Wash. 5. Black/ Wash. 6. Sand, white particles & vegetal. 7. Wheel. 8. 6 mm. 9. Well fired. 10. -. 11. 4.5 cm.

CONCLUSION

Studies on the pottery textures indicate that inorganic temper was most commonly used, followed by combined and organic tempers. Inorganic tempers included white calcite particles, shiny mica particles, sand and clay grains, and combinations of these. The buff spectra were commonly used, and the outer surface was more often treated than the inner one. The assemblage investigated here was decorated using various techniques, including incised, burnished, smoothed, augmented, painted, and combined techniques. Smoothed and burnished surfaces were usually seen on the vessels with red-spectra slip (red, red brown, dark red). At Dahan-E Gholaman, polishing and burnishing techniques were applied on fine vessels, like bowls and plates, and rarely on small jars. The potters were not interested in painted decoration, in contrast to Achaemenid potters in Fars, Khuzistan, and the other regions. Moreover, glazing techniques were not supported at this site.

The morphological varieties include:

1. Various bevelled rims, such as plain bevel, horizontal bevel, inward oblique bevel, outward oblique bevel, oblique rim with groove, bevelled with bow under rim and horizontal convex bevel
2. Various lip-like types, such as sharp lip, outwardly stretched lip, suspended stretched lip, rounded lip
3. Round rims, such as plain round, oblique round, sharp round, upwardly biased round
4. Banded rims, such as concave banded, plain banded
5. T-shaped rims, including plain T-shaped, suspended T form
6. Various three-sided rims, such as plain three-sided, suspended three-sided
7. Tetragonal rims
8. Sharp rims¹⁰³

¹⁰³ Zehbari 2012, p. 300.

Body morphologies include trumpet body, angled body, curved body, spherical body, outlined body, cylindrical body, body with neck, and unidentified body forms. Generally, the recovered bases in the assemblage include disk, concave, convex, ring, legged, round, and square bases. Flat bases are the most common in the assemblage, subdivided into flat disk and flat plain bottom.

Typological comparisons indicate similarities between pottery from Dahan-E Gholaman and pottery from other Achaemenid regions. The characteristic Achaemenid types, such as tulip bowls, carinated bowls, eggshell wares, and lidded bowls, have been recovered from other Achaemenid sites in Fars, Khuzistan, Mesopotamia, western Iran, eastern Iran, Afghanistan, Pakistan, and Turkey. One of the excavators of Dahan-E Gholaman believes that the site was evacuated and abandoned because of the natural conditions.¹⁰⁴ Architectural evidence dates the site to the early Achaemenid period, but research on the pottery indicates that the assemblage covers the early to late Achaemenid periods.

The research of Genito and Maresca posited a high level pottery industry in this city, but they had a different methodological approach from the present research based on the Iranian and Italian expeditions. New excavations at QN.15, 16, 22, and 23 helped us complete our study. Genito believes the industrial character of the pottery of Dahan-E Gholaman is due to its high socio-economic level in this site.¹⁰⁵ Our study indicated this idea is absolutely correct. He also worked on relationships between the most frequent pottery types and some of the buildings. Seleucid fish plates and breast-like bowls of the late Achaemenid period appear in the assemblage. The material is comparable to Takht-i-Jamshid pottery,¹⁰⁶ and especially pottery from Pasargad,¹⁰⁷ but Stronach and Schmidt believe these assemblages are dated to the late Achaemenid period and Genito dates Dahan-E Gholaman between the sixth and fifth centuries B.C.¹⁰⁸ Based on the comparative studies of the pottery, it appears that Genito's chronological assessment is not reasonable and, according to the discussion and evidence, we suggest the Achaemenid period as the chronological period for Dahan-E Gholaman. Maresca distinguished 11 fabrics among the assemblage that is stored in Rome.¹⁰⁹ We agree with his view that there is a high level of standardisation in the manufacturing processes in Dahan-E Gholaman.¹¹⁰ He did not mention beakers, which are one of most important and more functional pottery forms in Dahan-E Gholaman and were addressed by us in another article.¹¹¹

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¹⁰⁴ Scerrato 1979, p. 712.

¹⁰⁵ Genito 1990, p. 600.

¹⁰⁶ Stronach 1978, p. 252.

¹⁰⁷ Stronach 1978, p. 251.

¹⁰⁸ Genito 1990, p. 588.

¹⁰⁹ Maresca 2010, p. 425.

¹¹⁰ Maresca 2010, p. 431.

¹¹¹ Zehbari *et al.*, in press.

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Quotations from Ben Sira in Rabbinic Literature and Their Contribution to Ben Sira Textual Criticism

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Abstract

There are several textual witnesses for the book of Ben Sira: the Hebrew versions from Qumran and Masada, the six Hebrew manuscripts from the Cairo Geniza, quotations scattered in the talmudic and midrashic literature, and finally, the ancient translations into Greek and Syriac. These witnesses are not of equal status, neither with regard to their quality and reliability nor with respect to their date. The least important witnesses are the quotations from the book scattered throughout the talmuds and the midrashic corpus. Most scholars agree that these are fairly remote from the original text and should not be ranked on a par with the other witnesses. In this paper I discuss several such passages and compare the version in talmudic and midrashic literature with that found in the other textual witnesses for Ben Sira. Collecting the Ben Sira quotations in rabbinic literature and their individual analysis can surely contribute in a most significant way to the study of Ben Sira textual criticism.

Introduction

There are several textual witnesses for the book of Ben Sira: the Hebrew versions from Qumran and Masada, the six Hebrew manuscripts from the Cairo Geniza, quotations scattered in the talmudic and midrashic literature, and finally, the ancient translations into Greek and Syriac. These witnesses are not of equal status, neither with regard to their quality and reliability nor with respect to their date. For example, the texts from Qumran and Masada, the oldest that have survived, would seem to be the closest to the original Hebrew text.¹

The least important witnesses are the quotations from the book scattered throughout the talmuds and the midrashic corpus. Most scholars agree that these are fairly remote from the original text and should not be ranked on a par with the other witnesses. Lehmann, for example, asserts “there does not seem to be even a single case in which the quotation from Ben Sira in the Talmud is identical with that in the Cairo Geniza word for word.”² He enumerates six ways in which the talmudic excerpts have been changed: (1) inverted syntax; (2) a paraphrastic alteration of a word or grammatical form; (3) abridgement of the text by elimination of repeated elements; (4) combination of portions from different lines; (5) omission of part of the original text; and (6) expansion of the original text.³

¹ For a comprehensive survey of the textual witnesses see, e.g., Segal 1958, pp. 37–59; Skehan and Di Lella 1987, pp. 52–60.

² Lehmann 1970, p. 236.

³ Lehmann 1970, p. 236.

Lehmann adds that we should not be surprised by the imprecision in the tannaitic and amoraic quotations from Ben Sira; even their citations from the sacred text of the Bible sometimes involve changes, including added or omitted words, changes in word order, and the like. For example:

בראשונה היו קונין בשליפת המנעל. #הדא היא דכת' #וואת לפנים ביש' על הגאולה ועל
התמורה שלף איש נעלו' וגו'. (ירושלמי, קידושין, א, ה, ס, ע"ג. השווה לרות ד, 7: 'וואת לפנים
בישראל על-הנאקה ועל-התמורה, לקיים כל דבר, שלף איש נעלו...').

Originally purchases were made by removing the shoe. This is what is written, 'This was formerly [the custom] in Israel for redemption and for exchange, a man would take off his shoe, etc.' (J *Qiddushin* 1:5 [60c]. The full verse (Ruth 4:7), is: "This was formerly [the custom] in Israel for redemption and for exchange: *to confirm any transaction*, a man would take off his shoe ...".⁴

Thus changes in the quotations from Ben Sira, which has no inherent sanctity, are only to be expected.

The first scholars who studied Ben Sira after the discovery of the Geniza fragments had already examined quotations from the book scattered throughout rabbinic literature. They included Schechter, Smend, Segal, Kister, and, most recently, Haran.⁵ In most cases, they merely displayed or mentioned these quotations, juxtaposed with the parallel verses from Ben Sira. Sometimes they took very brief note of the differences, but without delving into their nature and character.

In this paper I discuss several such passages and compare the version in talmudic and midrashic literature with that found in the other textual witnesses for Ben Sira. I will also consider the nature and character of the differences. After this comparison, I will look at the extent to which it is accurate to say that the version of Ben Sira reflected in the rabbinic corpus is slightly different, or even very different, from that which is reflected in the other sources.

When we set ourselves this task of comparative research today, we enjoy a major advantage: the vast development in recent years in the archetypal research of the talmudic and midrashic corpus. This development has made the comparison of the quotations in this literature with the other Ben Sira witnesses much more precise and reliable.⁶

Ben Sira is an anomaly among the books of the Apocrypha, in that it is the only one quoted repeatedly in the rabbinic literature. The relatively large number of such quotations would seem to contradict the frequently stated negative attitude towards this book. Although it is never mentioned in the Mishnah, the Tosefta states that:

הגליון וסיפרי המינין אין מטמא? אין? הידים. סיפרי בן סירא וכל הספרים שנכתבו מיכן ואילך אין מטמא
את הידים

The Gospels and the books of the sectarians do not make the hands impure. The books of Ben Sira and all books written thereafter [=from the time of Alexander the Great] do not make the hands impure (T. *Yadayim* 2:13).

⁴ All the non-biblical quotes in this article are based on the texts as presented in the *Historical Dictionary of the Hebrew Language Academy*.

⁵ Schechter 1891, pp. 682–706; Smend 1906, pp. 46–56; Segal 1958, pp. 37–42; Kister 1990, pp. 303–378; Haran 1996.

⁶ On the importance of the archetypal texts and their contribution to Mishnaic Hebrew research, see Kutscher 1972, pp. 102–103; 1972, pp. 10–11; Bar-Asher 1984, pp. 187–189.

This statement indicates that the book was not considered part of the Holy Scriptures.⁷

There is one reference in the Mishnah to the *sefarim ḥiṣṣoniyim*, literally the “external books,” but Ben Sira is not listed as an example of this category:

ואילו שאין להן חלק לעולם הבא. האומר. אין תחיית המתים. ואין תורה מן השמים. ואפיקורס. ר' עקיבה אומ' אף הקורא בספרים החיצונים והלוחש על המכה ואומ'. "כל המחלה אשר שמתי במצרים לא אשים עליך כי אני יי רפאך". אבא שאול אר'. אף ההוגה את השם באותיותיו

And these have no share in the world to come: One who says: there is no resurrection of the dead and the Torah is not from Heaven, and an epikoros. R. Akiba says: Also one who reads the ‘external books’ or who utters a charm over a wound and says: “All of the diseases that I brought on the Egyptians — I will not bring them on you, for I, the Lord, am your healer” (Ex. 15:26). Abba Saul says: So too one who utters the Name according to its letters (Mishna *Sanhedrin* 10:1).

According to the Mishnah, a person who reads such works has no share in the world to come.

This locution, *sefarim ḥiṣṣoniyim*, appears once in the Babylonian Talmud,⁸ twice in the Jerusalem Talmud,⁹ and once in Numbers Rabbah.¹⁰

⁷ Some scholars believed that it was included in the canon at one time but was subsequently removed from it. Their major support for this idea was the terminology used to introduce quotations from it, such as *כדכתיב* which is also regularly used for biblical quotations (I will discuss this later). Today, however, the consensus is that Ben Sira was never part of the Jewish biblical canon. The Talmud occasionally employs the same terms used to introduce biblical quotations for the quotation passages from other early rabbinic compositions, such as *Megillat Ta'anit*:

והא כת' במגלת# תענית. #ארביסר וחמיסר פוריא אנון דילא למספד

For it is written in Megillat Ta'anit, The fourteenth day and the fifteenth day are Purim on which there is to be no mourning (BT *Megillah* 5b).

So this terminology cannot be adduced as evidence of Ben Sira's alleged original canonical status.

⁸ ר' עקיבה אומ'. אף הקורא בספרים החיצונים #תאנא. # בספרי מינים. #רב יוסף אמ'. אף ספר# בן-סירא #נמי# כספרי מינים #דאמי#....

R. Akiba says: Also one who reads the external books. It was taught: [This means] the books of the sectarians.

R. Joseph said: The book of Ben Sira, too, is like the books of the sectarians (BT *Sanhedrin* 100b).

⁹ ר' עקיבה או. אף הקורא בספרים החיצונים. כנון סיפרי בן סירא וסיפרי בן לענה. אבל סיפרי המירס וכל ספרים שנכתבו מיכן והילך הקורא בהן כקורא באיגרת. #מא' טע'. # יותר מהמה בני הזוהר' וגו'. להגיון ניתנו. ליגיעה לא

R. Akiba says: Also one who reads the ‘external books. Such as the book of Ben Sira and the book of Ben La'ana. But one may read the works of Homer and all those books written since then as if reading a letter. Why? “Of anything beyond these, my son, beware, etc” (Eccles. 12:12). They were given for contemplation, but not for wearying study (JT *Sanhedrin* 10:1 [28a]).

#תמן תנינ. #אילו שאין להן חלק לעולם הבא. האומר אין תחיית מתים ואין תורה מן השמ' ואפיקורוס. ר' עקיבה אר'. אף הקורא בספרים החיצונים והלוחש על המכה ואר'. 'כל המחלה אשר שמתי במצרים לא אשים עליך כי אני יי רפאך'. אבא שאול אר'. אף ההוגה את השם באותיותיו

There [in the Mishnah] we learned, These have no share in the world to come: one who says: There is no resurrection of the dead and The Torah is not from Heaven, and an epikoros. R. Akiba says: Also one who reads the ‘external books’ or who utters a charm over a wound and says: “All of the diseases that I brought on the Egyptians — I will not bring them on you, for I, the Lord, am your healer” (Exod. 15:26). Abba Saul says: So too one who utters the Name according to its letters (JT *Pe'ah* 1:1 [16b]).

¹⁰ ויותר מהמה בני הזוהר'. אמ' הקב"ה. כ'ד ספרים כתבתי לך. הזוהר ואל תוסף עליהם. למה. 'עשות ספרים הרבה אין קץ'. כל מי שקורא פסוק שאינו מעשרים וארבעה כאלו קורא בספרים החיצונים. הו' 'הזוהר עשות ספרים הרבה' שכל העושה כן אין לו חלק לעולם הבא

Of anything beyond these, my son, beware. ... The Holy One, blessed be He, said: I have written twenty-four books for you. Be careful, and do not add to them. Why? “Of making many books there is no end,” and if one reads a verse that is not from the twenty-four books [of the canon] it is as though he read the ‘external books’. This is [the meaning of], “Beware of making many books”, for anyone who does so has no share in the World to Come (Numbers Rabbah 14:4).

The Babylonian Talmud identifies these “external books” with the works of the “sectarians”, meaning Christians of both Jewish and non-Jewish origin. According to the amora R. Joseph, in the current text of the Talmud, Ben Sira, too, is considered a sectarian work:

אמ' רב יוסף אף ספר בן סירא נמי כספרי המינים

R. Joseph said: The book of Ben Sira, too, is like the books of the sectarians (BT *Sanhedrin* 100b).

This term is not defined in the Jerusalem Talmud, where it is exemplified by the book of Ben Sira and the otherwise unknown book of Ben La'ana. Thus, according to the Jerusalem Talmud, the “external books” are those that were not incorporated into the biblical canon. The consensus among scholars is that this explanation of the term is more accurate than that in the Babylonian Talmud and that the “external books” were works that were not accorded sacred status and were not included in the Holy Scripture. It is truly impossible, both philologically and historically, to identify the “external books” with the sectarian writings.

According to Haran,¹¹ the Talmud did not impose an absolute ban on reading these books. He maintains that the intention is rather that, as distinct from the canonical books, they were not to be employed and read in religious rituals and prayers. Among other things, they were never to be read in the chant reserved for the sacred books.¹²

If we accept this explanation, we can understand how these quotations found their way into rabbinic literature. Haran believes that even though Ben Sira's written work was known to the sages of the Second Temple Period, it was looked upon as an embodiment of the oral Law and its author was viewed as one of these sages. They cited him, in a fashion similar to their own midrashim, to explain various verses in Scripture or ideas that came up in the talmudic discourse.

There is one explicit statement in the Babylonian Talmud that it is permissible to teach the ‘excellent’ ideas found in the book:

אמ' רב יוסף. אע"ג דגנזוה לספרא # דבן-סירא # כי הני מילי מעליאתא דביה גרסינן להי

R. Joseph said: Even though they concealed the book of Ben Sira, we may teach them the excellent things it contains (BT *Sanhedrin* 100b).

Thanks to the extensive use that the sages made of it, the book of Ben Sira was preserved better than most of the other apocryphal books.¹³

Although there was no explicit ban on reading them, most of the books relegated to the Apocrypha were not in general use by the public and their original Hebrew texts were lost. Echoes of them do appear, however, in later Jewish writings, including late midrashim and exegetical works written after the Geonic period.¹⁴

¹¹ Haran 1996, pp. 129, 133.

¹² Haran 1996, p. 140.

¹³ Haran 1996, p. 181.

¹⁴ Haran, pp. 145, 148. For example, echoes from the Book of Jubilees may be found in two later Midrashim: “Midrash wayisa'u” (from medieval period) and “Midrash Tadshe”; echoes from the Book of Maccabees find in the Aramaic Antiochus scroll (dated from the end of the Talmudic or Arab periods).

Ben Sira 3:21–22

Moving on to the actual quotations from Ben Sira, the first case to be discussed involves a verse from Ben Sira and how it is quoted in the Jerusalem Talmud, in the Babylonian Talmud, and in three midrashim, two from the amoraic period and one much later.

The verse from Ben Sira is:

פלאות ממך אל תדרוש ומכוסה ממך אל תחקור במה שהורשית התבונן ואין לך עסק בנסתרות

Do not inquire into what is too wondrous for you, nor investigate what is concealed from you. Reflect upon what has been permitted you, for you should have nothing to do with hidden things (Ben Sira 3:21–22, MS A).

פלאות ממך אל תחקור. ורעים ממך אל <תדרוש> באשר הורשית התבונן. ועסק אל יהי לך בנסתרות

Do not investigate what is too wondrous for you, nor inquire into what is too evil for you. Reflect upon what has been permitted you, and have nothing to do with hidden things (Ben Sira 3:21–22, MS C).

The version in the Jerusalem Talmud is:

#ר' לעזר בשם בר סירה. #פליאה ממך מה תדע. עמוקה משאול מה תחקור במה שהורשית התבונן. אין לך עסק בנסתרות

R. Lezer said in the name of Bar Sira, Do not seek to know what is too wondrous for you; do not investigate what is deeper than Sheol. Reflect upon what has been permitted you. You have nothing to do with hidden things (JT *Hagigah* 2:1 [77a]).

The version in the Babylonian Talmud is:

כאן יש לך רשות לדבר. מכאן ואילך אין לך רשו' לדבר. שכן אמ' בספר בן-סירה. 'במופלא ממך אל תדרוש ובמכוסה ממך אל תחקור. במה שהורשית התבונן אין לך חקר בנסתרות'

Here you have permission to speak. From here on you have no permission to speak. As is said in the Book of Ben Sira, "Do not inquire into what is too wondrous for you, nor investigate what is concealed from you. Reflect upon what has been permitted you, for you have nothing to do with hidden things" (BT *Hagigah* 13a).

The version in the three midrashim is:

ר' אלעז' #בש' בר' סירה #א' #'. בנדול ממך בל תדרוש. בחזק ממך בל תחקור. במופלא ממך בל תדע. ובמכוסה ממך בל תחקור. במה שהרשית אתבונן. ואין לך עסק בניסתרות'

R. Elaz[ar] said in the name of Bar Sira: "Do not inquire into what is too great for you; do not investigate what is too strong for you. Do not seek to know what is too wondrous for you, nor investigate what is concealed from you. Reflect on what is permitted you, for you have nothing to do with hidden things" (Gen. Rabbah 8:2).

שכך כתוב בספר בן סירה. 'במופלא ממך אל תחקור. ובמכוסה ממך אל תדרוש. במה שהורשית התבונן. ואין לך עסק בניסתרות'

For so it is written in the book of Ben Sira: 'Do not investigate what is too wondrous for you, or inquire into what is concealed from you. Reflect on what is permitted you, for you have nothing to do with hidden things' (*Pesiqta Aseret Hadibberot*, "I am the Lord your God").

כאן יש לך רשות לדבר. מיכן ואילך כאילו נותן אצבע בעין. כך כת' בספר בן-סירא. 'במופלא ממך אל תחקור ובמכוסה ממך אל תדרוש. מה שהורשיתה התבונן ואין לך עסק בנסתרות'

Here you have permission to speak. From here on you should cover your eyes. As is written in the Book of Ben Sira, "Do not inquire into what is too wondrous for you, nor investigate what is concealed from you. Reflect upon what has been permitted you, for you have nothing to do with hidden things" (Midrash *Kōnen* 3 [1049 CE]).

The version of the Jerusalem Talmud has more deviations from the two Ben Sira manuscripts than do the quotations in the Babylonian Talmud and in the three midrashim (which are very close to the Babylonian).

All five quotations from Rabbinic Literature are closer to manuscript A of Ben Sira than to manuscript C.

The Root פל"א

The abstract noun פלאות "the wonderful", found in both Ben Sira manuscripts, is replaced by synonyms in the talmudic and midrashic literature. In the Jerusalem Talmud we find instead the noun פליאה; in the Babylonian Talmud and the three Midrashim, however, we have the adjective (actually the *huf'al* participle) מופלא 'wonderful'.

The noun פלאות occurs twice in the Bible — in Ps. 119:129:¹⁵

פְּלֹאוֹת¹⁶ עֲדוֹתֶיךָ עַל כֵּן נִצַּרְתָּם נַפְשִׁי

Your decrees are wondrous, so I have observed them (Ps. 119:129).

and Daniel 12:6:

... עד מתי קץ הפלאות

How long until the end of these wonders (Daniel 12:6).

The masculine plural form פלאים occurs in Lamentations 1:9:

... ותרד פלאים¹⁷ ...

She has fallen terribly [*lit.* wondrously] (Lam. 1:9).

The feminine plural is equally rare in the talmudic and midrashic corpus: it is never found in tannaitic texts; in the amoraic literature, there is one instance in the Babylonian Talmud, two in Midrash Heikhalot Rabbati, and one in Midrash Merkavah. It also appears nine times in later

¹⁵ There are many late usages in this psalm, but this is not one of them. About the late usages in this psalm see Hurvitz 1972, pp. 130–152.

¹⁶ According to C. Cohen (1996, pp. 306–307, n. 70; p. 308, n. 75), we can analyse the term פלאות in the Book of Psalms as a feminine singular abstract noun with the archaic abstract feminine singular suffix *-ot* which parallels the regular abstract suffix *-ut* as in the terms חכמות (Prov. 9:1) and קנאות (Num. 5:15, 18, 25, 29). In Ben Sira, this term could be analysed either as a singular abstract noun or a plural abstract noun, but it should be noted that the words which replace פלאות in rabbinic literature, namely פליאה and מופלא, are singular forms. I thank C. Cohen for these suggestions.

¹⁷ According to C. Cohen, this term can be analysed as masculine singular, like the personal name פלאי in Jud. 13:18, and the suffix *mem* can be taken as enclitic *mem*. On the enclitic *mem* in biblical Hebrew in general, see Cohen 2004, pp. 231–260. About the personal name פלאי in Jud. 13:18, see Brown *et al.* p. 811 (פְּלִיאָ < פְּלִיאָ); Kaddari 2006, p. 857.

midrashim. The masculine plural is found in the Judean Desert scrolls (the Thanksgiving Scroll) and in the piyyut literature. The singular **פלא** is similarly rare in this stratum. Not found in the Mishna, there are six instances in the liturgy, four in the *Mekhila*, and seven in the Babylonian Talmud.¹⁸

As already mentioned, the participial form **מופלא** replaces the rare form **פלאות** in the Talmud and the two midrashim. This participle is common in rabbinic literature, with eight instances in tannaitic texts.¹⁹ Although the *huf'al* is not attested for this root in the Bible, the use of the *hif'il* shows that the *huf'al* was possible as well.

The word substituted in the Jerusalem Talmud, **פליאה**, is rare in rabbinic literature — found only this one time in the quotation from Ben Sira and twice more in the *Tanḥūmā*. There is one instance in the Bible, in Ps. 139:6:

פְּלִיאָה²⁰ דַּעַת מִמֶּנִּי נִשְׁגְּבָה לֹא-אוּכַל לָהּ

Knowledge of the wonderful is too lofty for me; I cannot master it. (Ps. 139:6).

According to Segal,²¹ the Jerusalem Talmud was influenced by this biblical verse. As noted above, however, when the Talmud quotes Ben Sira it frequently replaces the biblical word used there with a more common talmudic synonym. In this case, however, given that the word **פליאה** appears only in the *Tanḥūmā* (a later midrash²²), the substitution may indeed have been triggered by recollection of the biblical verse. Another question is why the Jerusalem Talmud replaced one rare word, **פלאות**, with another rare word, **פליאה**? It is possible that the wider context of the verse in Psalms, rather than merely its use of **פליאה**, underlies the substitution. The author of Ps. 139 writes that knowledge of the Lord and His thoughts exceeds mankind's understanding.²³ A similar idea is expressed by Ben Sira, who instructs human beings not to investigate or inquire into matters that exceed their understanding.²⁴

In the Babylonian Talmud and midrashim, as mentioned, **פלאות** in Ben Sira is replaced by **מופלא**. The motive seems to be the assonance of **מופלא** with **מכוסה** in the parallel stich.²⁵

In the Jerusalem Talmud, the second halves of both stichs are very different from those in the Ben Sira manuscripts. In the second stich, they have only the verb **תחקור** 'investigate' in common. As for the term **עמוקה** 'deep', it has a parallel in the Syro-Hexapla.²⁶

¹⁸ All of them in Tractate Berakhot 56–57.

¹⁹ Once in the Mishnah and seven times in the halakhic midrashim and the Tosefta.

²⁰ **פְּלִיאָה** is the Qr, the Kt is **פְּלִיאָה** (= **פְּלִיאָה** < **פְּלִיאָה***). About the two versions see BDB, 811 (In Mishnaic Hebrew there is an opposite process, the verbal noun form **קָטִילָה** in the weak verb **קָטַל** becomes **קָטִילָה** [**קָטִילָה** < **קָטִילָה** שמע]. About this process in Mishnaic Hebrew see Kutscher 1972a, pp. 127–133. In this verse the word **פליאה** used as an adjective (BDB, 811), and the phrase **פליאה מן** has the same meaning as the phrase **נפלא מן**. About this phrase (adjective + **מן**) see Cowley 1910, 133c. According to Briggs, the adjective in this verse is **פלאי** (like the adjective [name of the angel] in Jud. 13, 18), and the last letter **ה** belongs to the next word **דעת** (**פליאה דעת ממני** < **פליאה דעת ממני***), as in the Greek version (ἐθὺς ἐμὸς ὁ θεὸς ὃς ἐξ ἐμοῦ [= The knowledge of thee is too wonderful for me]). About this suggestion see Briggs 1906, pp. 496, 500. It should be noted that both words are rare in Biblical Hebrew and in Post-Biblical Hebrew, so there is no preference for either of the versions.

²¹ Segal 1958, p. 17.

²² 799 AD.

²³ About this psalm see Garsiel 1997.

²⁴ Segal 1958, pp. 17–18; Skehan and Di Lella 1987, pp. 160–161.

²⁵ Even though the latter is a *pu'al* of a final *yod* root, rather than a *huf'al* of a final *aleph* root, they both contain the vowel *u*, whereas there is no phonetic similarity between **פלאות** and **מכוסה**.

²⁶ Although not in the same position as in the verse. On the version in the Jerusalem Talmud, see above. On the Syro-Hexapla version see below.

The Root רשׁׁ

In contrast to the universal replacement of פלאות, the verb הורשׁית is used in every instance. This form is the *huf'al* of the root *resh-shin-yod*. Its usage in Ben Sira represents a double innovation: the occurrence of this root vis-à-vis its absence in classical biblical Hebrew and morphologically, its verbal usage vis-à-vis later biblical Hebrew. The root *resh-shin-yod* occurs only once in the Bible, as the noun רשׁיׁן “grant, authorisation”.²⁷ Verbs derived from this root are not common in rabbinic literature, either: we find it only twice, in the *huf'al*, in tannaitic texts, and another seven times in the amoraic literature.²⁸ It also occurs in the *hif'il*²⁹ and the *nitpa'el*.³⁰ By contrast, the nominal form רשות is very common in rabbinic literature.³¹ This suggests that although the sages did not often employ this root as a verb, their familiarity with the related noun רשות kept them from replacing Ben Sira’s original verb with a different one. In addition, the use of this root in Palestinian Aramaic and Samaritan Aramaic indicates that it was familiar and common in the Second Temple period.³² The verb is also found in the Dead Sea Scrolls in the *hif'il* and the root also occurs there as the noun רשות.³³

The Noun עסק

The word עסק, in the second half of verse 22, appears in all of the citations, except the one in the Babylonian Talmud, where it is replaced by the term חקר. The root עסׁ meaning “to work at, be engaged in” is not part of the biblical lexicon,³⁴ but is common in rabbinic literature (16 instances in tannaitic texts and more than 80 in amoraic texts). It is possible that the Babylonian Talmud’s replacement of עסק by חקר was influenced by the usage of the verb תחקור in the previous verse (in the first stich, according to MS C, or the second stich, according to MS A).

Skehan and Di Lella propose emending v. 21 on the basis of the reconstructed *Vorlage* of the Greek:³⁵

נפלא/קשה/עמוק/רחוק ממך אל תדרוש ורם ממך אל תחקור

²⁷ Ezra 3:7.

²⁸ Once each in the Jerusalem and Babylonian Talmud, and five times in Genesis Rabbah. Four of these seven instances are the Ben Sira quotations we are dealing with here.

²⁹ Three times in Tannaitic texts.

³⁰ One doubtful instance in the Babylonian Talmud.

³¹ More than 100 instances in Tannaitic texts alone.

³² About this root in Palestinian Aramaic and Samaritan Aramaic see Sokoloff 1990, p. 530; Tal 2000, pp. 853–854. In Targum Onkelos and Targum Jonathan the root has another sense — “claim (a debt)”. About the meanings in Targum Onkelos and Targum Jonathan see Jastrow 1886–1900, vol. 2, p. 1500; Dalman 1905, p. 408. In Babylonian Aramaic both meanings occur. On Babylonian Aramaic see Sokoloff 2002, p. 1095.

³³ About this root in detail see Dihi 2004, vol. 2, pp. 655–658.

³⁴ In biblical Hebrew, we find the root עשׁ twice: once as a personal name of a well [Gen. 26:20], and once (in the same verse), as a verb התעשׁקו [Gen. 26:20]. The meaning of the root עשׁ in the bible is “to argue”, “to struggle”. About this root in the Bible see BDB, p. 796; Koehler and Baumgartner 1994–2000, vol. 2, p. 894. About this root in Ben Sira and its relationship to the biblical root עשׁ (homonymous root or polysemous root) see Dihi 2004, pp. 521–525.

³⁵ Skehan and Di Lella 1987, p. 159. The Greek version is: χαλεπώτερα σου μὴ ζήτει καὶ ἰσχυρότερα σου μὴ ἐξέταζε· ἢ προσετάγη σοι, ταῦτα διανοῦς, οὐ γὰρ ἐστὶ σοι χρεῖα τῶν κρυπτῶν (= עסק ממך אל תדרוש ורחוק ממך אל תחקור). (במה שצוית חשוב, ואין לך צורך [=תועלת] במכוסה).

Do not seek out what is too hard for you, or inquire into what is stronger than you; contemplate what has been commanded you, for you have no need of hidden things.

The quotation in Genesis Rabbah interpolates two additional stichs at the start of the passage:

ר' אלעזר' #בש' בר' #סירה #א' #בגדול ממך בל תדרוש. בחזק ממך בל תחקור. במופלא ממך בל תדע. ובמכוסה ממך בל תחקור. במה שהרשיתה אתבונן. ואין לך עסק בניסתרות'

R. Elaz[ar] said in the name of Bar Sira: "Do not inquire into what is too great for you; do not investigate what is too strong for you. Do not seek to know what is too wondrous for you, nor investigate what is concealed from you. Reflect on what is permitted you, for you have nothing to do with hidden things" (Gen. Rabbah 8:2).

There are parallels to the second stich in the Greek,³⁶ the Syriac, and the Syro-Hexapla versions. The Syriac version:

דקשין מנך לא תבעא ודתיקפן מנך לא תעקב במא דאשלטוך אסתכל ולית לך תוכלנא על כסיתא

Do not seek out things that are too hard for you, or pursue things that are too strong for you. Consider what has been set for you as a rule, for you have no power over what is hidden.

The Syro-Hexapla version:

דעמיקן מנך לא תבעא [לא מרגשנאית] ודחילתנן יתיר מנך לא תבחן בשטיותא אלין דאתפקד לך הלן אתרעא [חסיאית]³⁷

Do not inquire into things that are too deep for you [what is not sensed], and do not stupidly investigate things that are too powerful for you. Contemplate those things about which you were commanded [cautiously, with piety].

Conclusion

In conclusion, we have discussed the conflicting attitudes towards the book of Ben Sira found in the rabbinic literature. On the one hand, Ben Sira is considered to be one of the Apocryphal books and consequently not to be studied (although, as noted, this does not imply a categorical rejection of the book, but rather that it should not be referred to on sacred occasions such as in prayer). On the other hand, it is quoted frequently in rabbinic literature — more so than any other apocryphal work. We have also seen that such quotations from Ben Sira are rarely identical to the original Hebrew text as is now extant. Some of the changes seem to have been deliberate (the replacement of an abstruse or archaic term with a more common word), but others seem to go back to an alternate Hebrew text that is sometimes reflected in the ancient versions of Ben Sira. Every deviation from the original needs to be studied on its own merits and compared to all extant textual witnesses. Collecting all of the quotations from Ben Sira scattered in rabbinic literature is no simple task, because many of them are designated without specification of their source. Consequently we must identify them on the basis of their content and language. However, as we have seen and despite the aforementioned difficulties, collecting the Ben Sira quotations in rabbinic literature and their individual analysis can surely contribute in a most significant way to the study of Ben Sira textual criticism.

³⁶ On the Greek version see above note 35.

³⁷ Though the translations of the Syriac version are my own, I would like to thank Professor D. Talshir for his kind assistance.

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REVIEW ARTICLES

Biblical Hebrew Grammar Visualized

Why we need this work

Terry FALLA

Francis I. Andersen and A. Dean Forbes, 2012. *Biblical Hebrew Grammar Visualized*. (Linguistic Studies in Ancient West Semitic 6). Winona Lake, Indiana: Eisenbrauns. xvii + Pp. 394. Hardback. ISBN 978-1-57506-229-7.

Biblical Hebrew Grammar Visualized by Andersen and Forbes is a product of two life-times' research and the kind of pioneering work that comes along rarely. "It is," says van Peursen, "an innovative ground breaking contribution to Biblical Studies and to general linguistics." The scope of its aims is audacious and, as its authors are aware, it is sometimes provocative and invites debate.

When we enter the realm of an ancient text how poignantly aware we become of the humility with which we need to approach it, the inevitable limitations of even the best of our contemporary resources, and that underlying all of them is an ever-present need for a work that will allow us to strive towards an "exact sensitivity to syntax," "the grammars which are the sinew of articulate forms".¹ As Steiner says, "it is via grammar in the deepest sense that meaning enters, that it steps into the light of accountable presence". It is an "accountable presence" that this exhaustive and exacting work helps us strive towards and engage.

Its approach is from the perspective of corpus linguistics, which seeks to analyse and describe all the grammatical phenomena in a given body of work. Thus a grammatical study of the entire text of the Hebrew Bible is the goal, which the volume accomplishes by describing and tallying the kind of phrases and clauses encountered across all of Biblical Hebrew. In pictorial form, the authors give examples of the major constituents that form clauses, focusing on both grammatical functions and semantic roles.

What makes *Biblical Hebrew Grammar Visualized* so remarkable is that it provides us a means whereby we can analyse syntactically and classify grammatically every occurrence of every verb, noun and particle in the Hebrew Bible, and the way words work with the words around them. By virtue of its conceptual framework of reference, aims and methodology, it is not just for the exigencies of the present but a work for the future and as such invites and, we think, deserves the suite of reviews that we offer here.

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¹ Steiner 1989; p. 158.

The Application of Computational Linguistics to the Study of Biblical Hebrew Grammar

Steven E. FASSBERG

Francis I. Andersen and A. Dean Forbes, 2012. *Biblical Hebrew Grammar Visualized*. (Linguistic Studies in Ancient West Semitic 6). Winona Lake, Indiana: Eisenbrauns. xvii + Pp. 394. Hardback. ISBN 978-1-57506-229-7.

Biblical Hebrew has been studied intensively since the Middle Ages, initially by Jewish exegetes and grammarians, and later by their Christian counterparts. The modern study of Biblical Hebrew grammar (and lexicon) began with Wilhelm Gesenius in the 19th century, and the foundations of grammar that he laid are still in place in most modern treatments. However, the Chomskyan revolution at the end of the 1950s loosened the traditional approach that dominated the study of Biblical Hebrew, with the result that in the latter half of the 20th century new general linguistic schools of investigation were applied. One such trend, computational linguistics, was devoted to using computers to describe in detail the linguistic makeup of corpora. Francis I. Andersen and A. Dean Forbes have been at the forefront of developing computational linguistics and applying it to the corpus of Biblical Hebrew. *Biblical Hebrew Grammar Visualized* is an up-to-date description of their on-going efforts.

As noted by Andersen and Forbes, more has been written on the phonology and morphology of Biblical Hebrew than of other biblical linguistic fields, understandably, since phonology is a building block for morphology, and morphology in turn is a building block for syntax. Of the different subfields within syntax, morphosyntax (i.e., the syntactic behaviour of forms) has attracted the most attention in grammars and in articles. The syntax of larger units, however, namely, phrases, clauses, and also the larger context of a text have yet to be adequately described. The widely used introductory Biblical syntax by B. K. Waltke and M. O'Connor is a prime example of this:¹ despite its title, the book is limited to morphosyntax. Several standard reference works of Biblical grammar contain sections dealing with syntax at the clausal level, e.g., those by P. Joüon and T. Muraoka² and by W. Gesenius.³ But other classics of Biblical Hebrew research never got as far as syntax, notably, that of G. Bergsträsser,⁴ who, unfortunately, died before he had a chance to complete his grammar, and the diachronic grammar of H. Bauer and P. Leander,⁵ who seemed to

¹ Waltke and O'Connor 1991.

² Joüon and Muraoka 2009. The original French version (Joüon 1923) has long been noted as one of the better treatments of biblical syntax.

³ Gesenius 1910.

⁴ Bergsträsser 1918–1929.

⁵ Bauer and Leander 1922.

have had no intention of including clausal syntax. *Biblical Hebrew Grammar Visualized* by Andersen and Forbes seeks to fill the void in syntactic analysis at both the phrasal and the clausal level.

Since the early 1970s Andersen and Forbes have teamed up in applying computational analyses to the investigation of Biblical Hebrew. The past five decades have witnessed a steady flow of their contributions to the field, including concordances to different biblical books, two dozen articles on different aspects of linguistic computation, and, perhaps their most widely known joint work (at least among biblicists and Hebraists), a monograph on the use of *matres lectionis*.⁶ In retrospect, Andersen's influential monograph on the verbless clause⁷ adumbrated the path his research was to take in the following years. Andersen appears not to have used a computer in compiling the data for this monograph, but the exhaustive database he constructed manually can be seen as a harbinger of what later he would get computers to do for him. Over the years Andersen and Forbes have made great strides in exploiting computers to crunch linguistic data. They have slowly, but surely, taught computers to analyse databases: their goal has been to replace descriptions based on impressionistic sampling, which is what most linguists and philologists have done, with analyses based on a comprehensive mining of databases.

Biblical Hebrew Grammar Visualized goes a step further than the previous treatments by Andersen and Forbes in that it presents students and scholars of Biblical Hebrew with a more detailed and complete look into their current thinking on phrasal and clausal structure analysis as generated by computers. The authors stress repeatedly that the book is a work in progress and that there still is much to be refined and improved upon. Despite their protestations that the book is merely a glimpse into the state-of-the-art, it is a milestone in research since it (1) demonstrates clearly to the uninitiated in computation linguistics the benefits of exploiting computers for syntactic research; (2) shows some of the fruits of such syntactic research into phrasal and clausal analysis; (3) presents detailed graphic parsing of some phrases and clauses. After reading this book, no one can deny that harnessing computer power for syntactic analysis will have a significant impact on further research.

In the preface to the recent *Encyclopedia of Hebrew Language and Linguistics*, the general editor, G. Khan, wrote of the need to unite the research of scholars working with different disciplinary approaches and to "bring the field of the Hebrew Language more into the orbit of general linguistics than is presently the case."⁸ *Biblical Hebrew Grammar Visualized* has much the same goal: it seeks to bridge the chasm that often separates the field of modern linguistics from the traditional investigation of Biblical Hebrew. Towards that end Andersen and Forbes have gone to considerable lengths. For the benefit of Biblicists and philologists, they explain modern linguistic and computational concepts; they even highlight in a different font terms that can be found in the glossary at the end of the book. Some appendices provide additional basic information concerning different linguistic approaches; others touch on the choices the authors have made concerning the biblical text, which Hebrew manuscript and printed edition serves as the basis of their investigation, and thoughts on the application of documentary sources (e.g., JEPD) and "text types" (i.e., genres).

⁶ Andersen and Forbes 1986.

⁷ Andersen 1970.

⁸ Khan 2013, vol. 1, p. xvii.

Andersen and Forbes open the book with a brief introduction about the corpus under investigation and a statement of their linguistic preferences in studying Biblical Hebrew — they define themselves as generativists who prefer phrase-structure grammar, and as corpus linguists who stress empiricism, performance, language-specific descriptions, quantitative models, surface structures, and functional approaches (as opposed to Chomskyans; see below). The book then moves to discussions and illustrations of the graphic visualisation of phrase markers, parts of speech, phrase markers, basic phrase types, complex phrases, main clauses, embedded clauses, clause immediate constituents, semantics, investigation of verbs, makeup of clause immediate constituent subtypes, quasiverbials, verbless clauses, non-tree phrase markers, discourse analysis, and supra-clausal structures.

The syntactic analysis of phrases, clauses, sentences, and supra-clauses is a hierarchical strategy that begins with the basic building block of immediate constituents, as noted by the authors. The concept of immediate constituents is not new in linguistic research — it is attested already in L. Bloomfield's *Language* and has become a staple of all structuralist analyses.⁹ What Andersen and Forbes do, however, which goes beyond what was done previously, is to talk of larger, clausal immediate constituents, which embrace the smaller building blocks and continue to expand until they make up the entire clause. The result is the elaboration of the constituents of each clause, which shows the grammatical and semantic functions of the constituents, together with the grammatical glue that binds them. This is done pictorially with sentences in the shape of leafy trees (Andersen and Forbes prefer to depict them horizontally and not vertically). Andersen and Forbes are not the first to grow trees, but their sketches are far more detailed and fuller than most treatments. Sometimes, however, the detail is so great that it is easy to lose sight of the forest; the authors themselves are aware of this: "As has been noted previously, constructions can become very (disconcertingly?) elaborate" (p. 70).

Though the luxuriant trees that Andersen and Forbes draw are a significant contribution to the subject of phrasal and clausal syntax, another just as substantial contribution of *Biblical Hebrew Grammar Visualized* is the precise tallies of syntactic phenomena. Before the advent of computer programs, scholars investigating syntactic features would laboriously read through the entire Hebrew Bible several times in search of data, and more times than not, would miss an example here and there. With proper programing and parsing, the computer database gives access to all the data. The full database from which Andersen and Forbes draw their tallies is based on the analysed phrase markers that the authors developed, and which are available in Logos Bible Software.

Andersen and Forbes formulate their conclusions based on precise statistics, for which they give a few choice examples (for a full listing of examples one has to go to Logos Bible Software). The numbers are often quite illuminating — though the figures are usually not broken down according to either genre (e.g., prose vs poetry; narrative vs direct discourse) or chronology (First Temple period vs. Second Temple period). Andersen and Forbes show full awareness of the importance of refining the manipulation of statistics and comment on it from time to time as a desideratum, but for the purposes of simplifying the presentation of the data, they choose not to do so:

⁹ Bloomfield 1933, p. 161; Harris 1946; Wells 1947.

Usually in this book, we reduce the complexity of the situations being described in order to simplify exposition. This is standard practice when one is doing “exploratory data analysis,” as we are in general. To probe our data fully would have unduly expanded and delayed the publication of this volume. Readers are urged to keep this author-imposed limitation in mind and encouraged to view it as an invitation to further research. (p. 97).

On pp. 96–97, however, they diverge from their practice and classify briefly their data on word order in verbal clauses according to “gross text type”: narrative, human-to-human speech, human-to-God speech, and Divine speech.

Andersen and Forbes have marshalled their statistics impressively. One of the most interesting claims they make based on their tallies is that Hebrew is a non-configurational language (as defined by Kenneth Hale): it has free word order, discontinuous expression, and null anaphora. It has long been argued that the dominant, but by no means exclusive, word order in verbal clauses is VSO.¹⁰ This is the common word order in narrative sequences. It has been pointed out that if one excludes all *waw*-consecutive forms, the VSO word order is no longer preponderant. The debate, however, has focused on whether the *waw*-consecutive forms should be disqualified from a description of the biblical norm. Andersen and Forbes come down clearly on the side of those who discount the *waw*-consecutive forms (in their language “anchored” forms). But apart from a few examples on p. 88, one sees only numbers and next-to-no discussion of the variables that may have been at play. One feels a bit uncomfortable discussing the topic without looking at all the factors that probably influenced word order. The authors, however, are not blind to this problem:

We are all-too-well aware that some readers will be frustrated by our not examining the influences of potentially relevant explanatory variables on the phenomena described in this volume (p. 97).

Pragmatic considerations are often crucial¹¹ and other factors may also be involved, e.g., the difference in clause-position between a verb that expresses injunction or volition (clause-initial) as opposed to a verb expressing the indicative mood (non-initial).¹²

Overall the bibliography is heavily slanted towards modern linguistic works, which makes sense since Andersen and Forbes are applying modern linguistic theories to Biblical Hebrew; nonetheless, one might have expected more mention of modern syntactic treatments of Biblical Hebrew that are based on current linguistic theories.¹³ For example, in the discussion of word order in verbal clauses, the recent discussions by Joosten and Moshavi merit at least a footnote.¹⁴

Because of the novelty of the terminology for most students of Biblical Hebrew, I wonder if the book will fully succeed in having an impact on all of its target audience as defined in the preface: intermediate and advanced students of Biblical Hebrew, perhaps even some beginners, as well as researchers into Biblical Hebrew. I fear that the authors are overly optimistic. Most students of Biblical Hebrew come to the subject with a background in the Classics, the Bible, religious studies, theology, ancient Near Eastern history or Semitic philology. My impression is

¹⁰ Most recently Joosten 2012, pp. 356–362; Moshavi 2012, pp. 7–17.

¹¹ See, for example, Moshavi 2010.

¹² Revell 1989, p. 32; Niccacci 1990, pp. 77–78; Niccacci 2006, p. 251 and literature cited in n. 8.

¹³ An exception is Merwe *et al.* 2002, which is cited extensively.

¹⁴ See n. 10 above.

that only a limited group of students who learn Biblical Hebrew have studied modern linguistics. For this reason I think most students will find the terminology employed in *Biblical Hebrew Grammar Visualized* an obstacle to understanding the insights that the authors wish to share. The glossary of terms at the end of the work certainly is helpful, yet, there remains much that will be obscure to the average student, though it is part of the basic professional jargon that is used by linguists, e.g., “token”, “scoping”, and especially the ubiquitous “licensing” (even though it can be found in the glossary under “licensing relation”). Other phenomena described by Andersen and Forbes are familiar to students under a more traditional nomenclature: e.g., the phenomenon of “extraposition” (pp. 103–104), which is a widely used term in linguistics today, is known to your average Biblical Hebrew student as *casus pendens*.¹⁵ In the same vein, I have heard from several colleagues who taught beginning Biblical Hebrew from T. O. Lambdin’s introductory grammar¹⁶ that they soon discovered that their students found the relatively simple linguistic terminology much too difficult to absorb; eventually, they had to abandon Lambdin’s grammar and teach from other introductory works that avoided linguistic terminology.

The following are some desultory comments:

- p. 29 and passim נָּ. The repeated glossing of נָּ as an emphatic particle is not the generally accepted explanation of the form.
- p. 30 מְּ as 3rd-pers. fem. dual. Most scholars understand the examples in Zech 5:10, Ruth 1:22, and Song 6:8 as instances of the masc. form displacing the fem., and not a dual.¹⁷
- p. 39 מְּעַל ‘above’ should be repointed מְּעַל (without the *daghesh*)
- pp. 59–62 A word about the function of “echo phrases” would be helpful for a student (e.g., intensification or distribution [*quivis* construction]).
- p. 81 What is meant by “child count”? A simple counting of forms? The term is unclear.
- p. 83 For subsetting phrases, see now M. Park on Biblical and Rabbinic Hebrew.¹⁸
- pp. 123–124 There is considerable evidence that the “rhetorical question operator” הֲלֵא is actually the reflex of an old presentative particle.¹⁹
- p. 182 Andersen and Forbes talk about the violation of number agreement in 2 Sam 17:14, where a singular verb combines with a plural (compound) subject. The impression one gets is that this is an exceptional usage when in fact it is the rule in Biblical and in Mishnaic Hebrew: the verb preceding a compound subject agrees with the first noun in number and gender.²⁰
- p. 234 “If we call the unit of inter-clause distance the *lambdin* (or *lam*), in memory of the Harvard professor...” To paraphrase Mark Twain, the reports of Prof. Thomas O. Lambdin’s death are greatly exaggerated.
- pp. 328–330 The problematic and unexpected dots in Codex Leningrad have been re-examined recently.²¹

¹⁵ For example, Gesenius, p. 458; Niccacci 1990, pp. 136–137; Joüon and Muraoka 2009, pp. 551–554.

¹⁶ Lambdin 1971.

¹⁷ See, for example, Levi 1987, p. 161 and Blau 1988, 2007; *contra* Rendsburg 1982, 2001.

¹⁸ Park 2013, p. 375.

¹⁹ Brown 1987; Ben-Hayyim 2000, p. 320.

²⁰ Moreshet 1967, 1983.

²¹ Golinetz 2013.

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Encoding Biblical Hebrew: Reflections on the Linguistic Theories Underlying the Andersen–Forbes System

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Francis I. Andersen and A. Dean Forbes, 2012. *Biblical Hebrew Grammar Visualized*. (Linguistic Studies in Ancient West Semitic 6). Winona Lake, Indiana: Eisenbrauns. xvii + Pp. 394. Hardback. ISBN 978-1-57506-229-7.

Biblical Hebrew databases and grammars are not a novelty: numerous medieval treatises deal with grammatical features of the Hebrew Bible, providing statistics as to the number of occurrences of a given phenomenon. This can already be seen in the marginal notes that accompany the biblical text on Masoretic manuscripts.

The development of computer sciences in the twentieth century has paved the way for the creation of extensive computer databases of the Hebrew Bible, starting with the text itself — usually that of the Leningrad Codex rather than an eclectic edition or a text with critical apparatus. Lemmatisation enhances the textual database by identifying the various forms of a given lemma, thus enabling the user to perform lexicological queries. Morphological analysis encodes such features as part of speech, person, gender, number, state, aspect, and so on. The user is then able to search for all occurrences of a given pattern.

The Andersen-Forbes database has all these features, and already differs from other databases in this respect. But more importantly, the Anderson-Forbes database goes beyond the word level so as to encode syntactical relationships. Various types of constructions, phrases, clauses or sentences are identified throughout the biblical text, based on the authors' understanding of Biblical Hebrew syntax. These underlying principles are explained in their latest volume: Francis I. Andersen and A. Dean Forbes, *Biblical Hebrew Grammar Visualized* (Linguistic Studies in Ancient West Semitic 6), Winona Lake, Indiana: Eisenbrauns, 2012.

The first chapter, "Introduction," contains several prolegomena. The authors define "Biblical Hebrew" as the language of the biblical text according to the Leningrad Codex (p. 1). In other words, this codex serves as the textual basis for their database. This comes as no surprise, since L is the earliest complete Hebrew Bible known to us. The *Biblia Hebraica Stuttgartensia* (BHS), and now the *Quinta* (BHQ), chose this codex as their main source; most biblical databases are likewise based on L.

Choosing a biblical manuscript as a main source is one thing; defining "Biblical Hebrew" as the language of a single manuscript is another. The Dead Sea Scrolls have revealed (or rather confirmed) that the Masoretic text belongs to but one of several traditions, some of which are

more ancient and thus closer to the language of the biblical writers. The language of the Samaritan Pentateuch, for instance, is as much *Biblical Hebrew* as that of the Masoretic text — if not more, judging by its vocalisation.

There's more. Assuming that the Masoretic tradition is preferred over others, and that *Biblical Hebrew* is understood as *Masoretic Biblical Hebrew* or *Leningrad Codex Hebrew*, it is quite surprising that the authors opted to keep all “*Kethiv* readings, setting aside the *Qere* variants” (p. 2). *Qere* readings are not only part of the Masoretic tradition; they are what the Masoretes consider to be the proper reading, over — and in spite of — the reading suggested by the consonantal text. By choosing *Kethiv* readings, Andersen and Forbes go against the Masoretic tradition. This inconsistency has immediate repercussions: how should one parse unvocalised *Kethiv* readings? Whereas the Masoretic vocalisation and cantillation system differentiates otherwise homographic forms (e.g., *Qal* or *Piel*), *Kethiv* readings are more often ambiguous. In the Andersen-Forbes database, the latter have “been vocalized in accordance with Gordis” (p. 3). Why is a hypothetical vocalisation preferred over the factual Masoretic vocalisation of the *Qere*? Is it an attempt to recover a “better” or “earlier” text? Why, then, trust the Masoretic vocalisation elsewhere and not suggest a “better” one? Why exclude “earlier” witnesses such as the Dead Sea Scrolls?

The authors are aware of this issue, and emphasise that their database might later be improved so as to “make two representations of each clause that contains a *Qere* / *Kethiv* pair of words that differ in syntax” (p. 3). Hopefully, other variant readings will be included as well, especially those attested by the Dead Sea Scrolls and the Samaritan tradition.

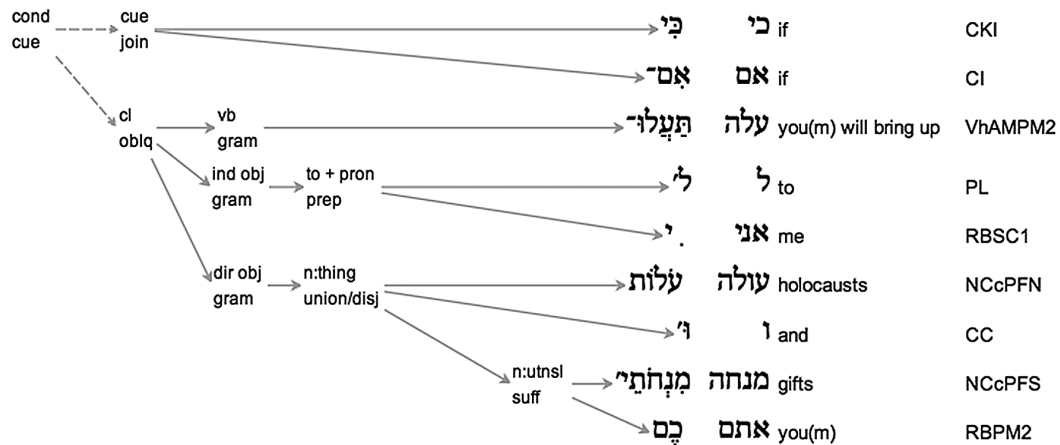
After having defined “Biblical Hebrew,” the authors talk about “Grammar” (§ 1.2). Acknowledging the “extensive treatments of morphology” carried out by previous grammarians, Andersen and Forbes see the need for a wider approach: “Our major working units are whole clauses” (p. 5). They are aware of Joüon's or Waltke and O'Connor's recent works on syntax, but “the treatment remains at the level of microsyntax” or “short-range syntactic functions” (p. 8). In order to account for the internal syntax of complete clauses, the authors propose to build enhanced phrase markers linking each constituent to its neighbours according to their syntactical relationships. A graphical representation is then drawn by means of labels and arrows, thus allowing the reader to “visualize” the grammatical structure of the Hebrew text. This is Hebrew grammar “visualized” — hence the volume title.

Chapter 2 deals with “Text Division” (p. 15): on the one hand, words can be composed of several segments (for instance, בַּיּוֹם = preposition + definite article + noun); on the other hand, several words can be ligatured to form a proper noun (for instance, בֵּית־אֵל = Bethel). The authors insist that even such a lexicalised compound as לִפְנֵי “before” is segmented into preposition + noun (p. 16); it seems quite inconsistent, then, that the words כִּי אִם are said to be ligatured on the mere assumption that they function together as a subordinating conjunction meaning “except” (p. 17). But this is not always the case; let us look at Amos 5:22a:

כִּי אִם־תַּעֲלֶיךָ עֲלֹת וּמִנְחֹתֶיךָ לֹא אֶרְצֶה

“‘It is’ that if you raise up to me burnt offerings and grain offerings, I will not take pleasure.”

Understanding **כִּי אִם** as a conjunction meaning “except” would imply that Yhwh *does* take pleasure in the people’s burnt and grain offerings, which is the opposite of what the author is saying (see vv. 21ff.). I checked the Andersen-Forbes database (version 0.97) on this verse:

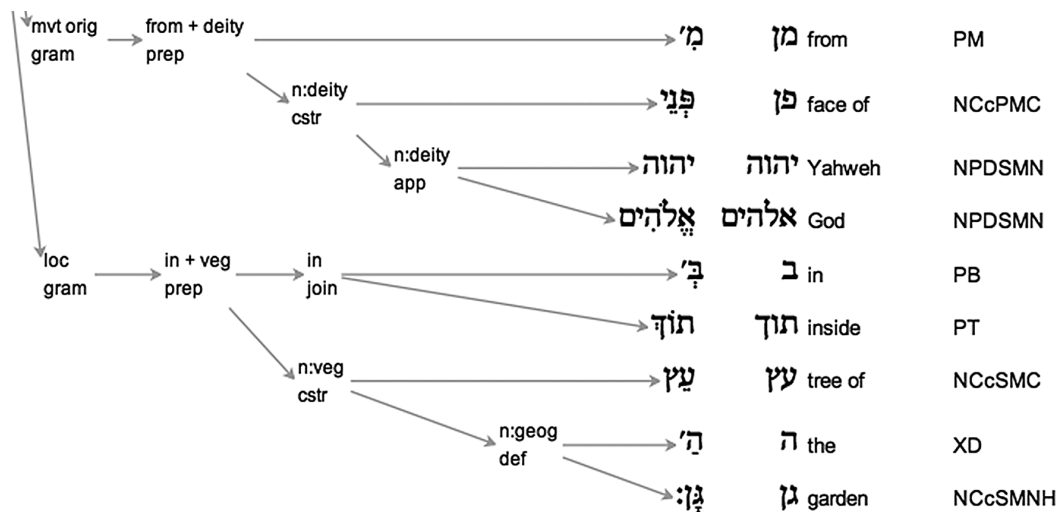


Indeed, **כִּי** and **אִם** are not grouped together as a single segment and are both translated “if,” which indicates an awareness that **כִּי אִם** is not understood as meaning “except.” But the Andersen-Forbes database allows for multiple translations of a segment; **כִּי אִם** could thus be taken as a single segment translated “if.” Alternatively — and preferably — **כִּי** and **אִם** could always be taken as two segments: **כִּי** introduces the subordinate clause and **אִם** emphasises the conditional nature of this clause. I don’t see the need to ligature them into one segment, and it seems inconsistent to do so while even **לִפְנֵי** is divided into two segments.

In Chapter 3, “Parts of Speech” (p. 20), the authors present the reader with their system of segment grammatical categories. Beyond the major traditional categories, such as “conjunctions,” “prepositions,” “substantives,” “verbs”, *etc.*, Andersen and Forbes propose to distinguish no less than 37 grammatical categories for Biblical Hebrew. Nouns, for instance, are divided into eight categories, including a dedicated category for a single lexeme, **כָּל** *all*; this is due, we are told, to “its odd behavior” (p. 24). Notwithstanding its abundant use, **כָּל** is certainly not the only word in the Hebrew Bible exhibiting an “odd” behavior. The very purpose of any taxonomy is to group elements according to their shared features; subcategories are useful as long as they highlight features shared by several but not all elements of a category. Unfortunately, the reader quickly learns that Andersen and Forbes did not stop here: their system ends up (p. 25) with 76 parts of speech! Major prepositions such as **בְּ**, **כִּי**, **לְ**, **מִן** *etc.*, all seem to deserve their own category. Some segments are even given two categories: **אִם**, for instance, belongs either to the “*if* **אִם**” category or to the “[question] **אִם**” category. In fact, it may even belong to a third category named “*not* **אִם** / **אִם** / **לֹא**.” One may wonder, then, why other words are not rewarded with their own part(s) of speech, left as they are with such categories as “other conjunctions” or “other prepositions.”

Again, if the purpose is to “facilitate further study,” as suggested by the authors about **כל** (p. 24), a computer database will easily combine multiple search criteria, including the specification of a given lemma such as **כל**. Likewise, searching for occurrences of **אם** tagged as “conjunction” (as opposed to “preposition,” for instance) is simple and avoids the creation of an unnecessarily complex and arbitrary taxonomy that includes single-lexeme categories such as “*if אם*.”

Other comments could be made on the Andersen-Forbes 76 parts-of-speech taxonomy. For instance, **תוך** is considered to be a “preposition” — it even receives its own one-lexeme category (“*inside תוך*” p. 25) — rather than the construct state of **תָּוךְ** “midst”; this seems inconsistent with the authors’ previous statement that **לְפָנַי** “before” is to be segmented into preposition + noun (p. 16). Perhaps **תוך** is to be tagged as a “preposition” only when it functions as such without another preposition; I checked the Andersen-Forbes database: this is unfortunately not the case. Here is an example from Genesis 3:8b, where Adam and Eve hide **מִפְּנֵי יְהוָה אֱלֹהִים בְּתוֹךְ עֵץ הָגָן** “from the face of Yhwh Elohim, in the midst of the tree(s) of the garden.” Both **פָּנֶה** “face” and **תָּוךְ** “midst” are used in the construct state and prefixed with a preposition so as to become prepositional compounds. Yet, the Andersen-Forbes database sees **תוך** as a preposition, not a noun:



By failing to identify the parallel syntax, the Andersen-Forbes database will miss a number of occurrences searching for patterns like “preposition + noun in the construct state.” This will have repercussions when studying various types of phrases and clauses in Biblical Hebrew syntax, as found later in the volume. For instance, the authors state that “of the 74,058 prepositions in Biblical Hebrew, 24,973 (34%) are part of basic prepositional phrases” (p. 53), 43.8% of which combine with a noun (p. 54). The precision of these numbers and percentages is deceptive, as they are simply inaccurate.

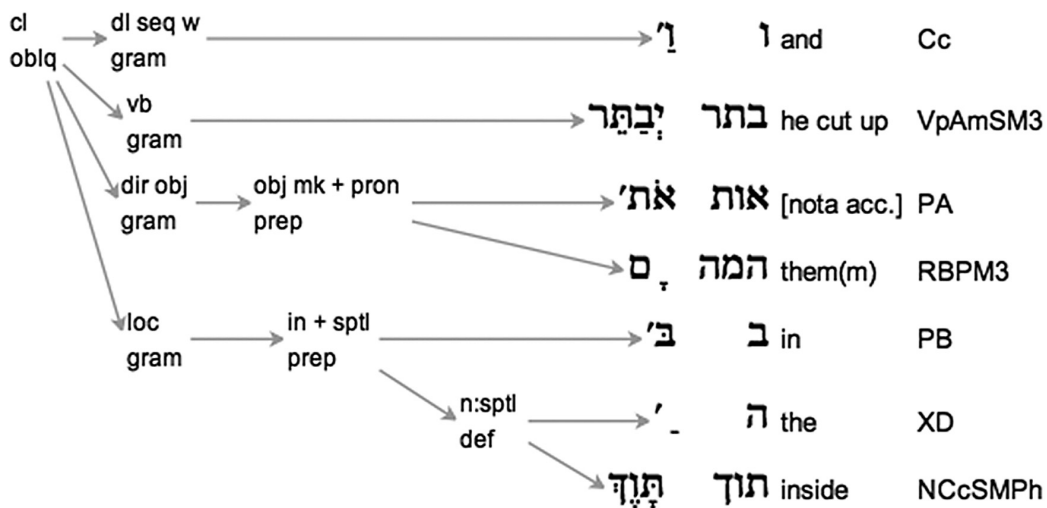
As far as prepositional compounds are concerned, the authors’ policy is to leave “compounds unsegmented *if* their nominal components were never attested with nominal functions and their

original literal meaning” (p. 27). This principle itself is questionable: how do we know *a priori* that a nominal component is never attested with a nominal function? Working on a closed corpus certainly helps (especially if one excludes variant readings), but this remains problematic from a methodological and epistemological standpoint. Now, assuming we accept this principle, what about תָּוֹךְ? From a morphological standpoint, it is the construct state of תָּוֹךְ, a segholate noun of the **qatl* pattern from an ו"ע root (cp. מָוֹת → מוֹת “death”; the diphthong **aw* contracts to *ô*). Now, תָּוֹךְ is attested with a nominal function and its original literal meaning; see for example, Genesis 15:10:

וַיִּקַּח-לּוֹ אֶת-כָּל-אֵלֶּה וַיְבַתֵּר אֹתָם בְּתוֹךְ

“He took for him all these and cut them in the middle.”

I checked again the Andersen-Forbes database:



In this verse, תָּוֹךְ is correctly identified as a common noun. In fact, it appears that the Andersen-Forbes database has two distinct lemmas, a preposition and a noun. This is really problematic from both a lexicological and grammatical standpoint, and one can only hope that the Andersen-Forbes database (as well as their underlying grammar) will be corrected as soon as possible.

When it comes to proper nouns, the 76 parts-of-speech taxonomy includes such categories as “land proper nouns,” “mountain proper nouns,” “city proper noun,” or “river proper noun.” While I find it very useful to be able to search for specific kinds of toponyms, the purpose of a part-of-speech taxonomy is to group or separate segments according to their syntactical — not semantic — features. The parts of speech mentioned above deal with semantics, not syntax: proper nouns designating cities function the same way as those designating land; they should not be attributed two different parts of speech.

This is not to say that encoding semantics is useless; on the contrary, one of the often underestimated values of the Andersen-Forbes database is its semantics feature presented on pp. 38ff.

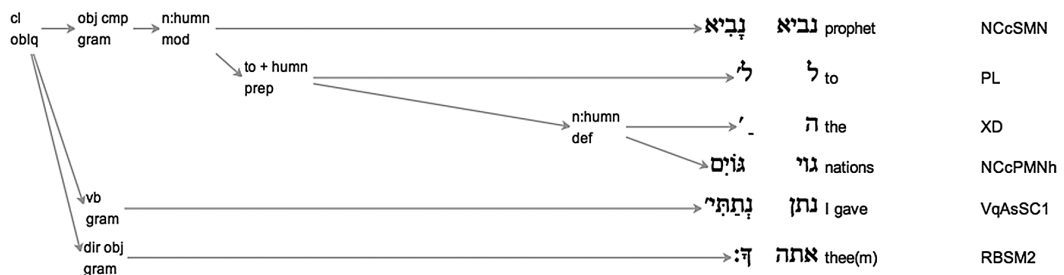
But this feature is *not* the same as the part-of-speech taxonomy discussed above. As a result, semantic data is sometimes encoded twice: עֶדֶן is tagged as “other geog. proper nouns” according to the 76 parts-of-speech taxonomy (p. 25), and as “geographical name or feature” according to the semantic taxonomy (p. 38). This is yet another example showing that the Andersen-Forbes part-of-speech taxonomy is flawed. In their defence, I should mention that the semantics feature was added later, “in the mid-1980s to assist computer parsing” (p. 39). The inclusion of “semantic” subcategories in their part-of-speech system may thus have been an early attempt at encoding semantic features (although this is not clearly stated). Moreover, the authors confess that their new semantics feature is not (yet) based on a principled taxonomy: “When we assigned the semantic codes, principled taxonomies were beyond our ken. The introduction of enriched, even multivalued semantic labels is one of our (too-populated) priorities” (p. 39). I would suggest that, since the semantics taxonomy will be updated, so should the part-of-speech taxonomy.

In the 76 parts-of-speech system, participles are also rewarded with several subcategories: “pure noun participles” is a subcategory of the “substantives” category, while “noun-verb / noun participles,” “noun-verb participles,” and “pure verb participles” are subcategories of the “verbals” category (p. 25). Later in the chapter (pp. 32ff.), these various types of participles are explained and illustrated with examples. One of them is 1 Samuel 8:1:

וַיְהִי כִּאֲשֶׁר זָקֵן שְׁמוּאֵל וַיִּשֶׂם אֶת־בָּנָיו שְׁפָטִים לְיִשְׂרָאֵל:

“And it was, as Samuel was old, <that> he put his sons <as> judges for Israel.”

According to the authors, שְׁפָטִים is an example of a noun-verb participle: it “has its own beneficiary” (p. 34), לְיִשְׂרָאֵל. It differs from a “pure noun participle” that exhibits only nominal characteristics. This example is not convincing, as the same sentence could have been constructed with a common noun such as, let’s say, נְבִיא “prophet”: וַיִּשֶׂם אֶת־בָּנָיו נְבִיאִים לְיִשְׂרָאֵל “he put his sons <as> prophets for Israel.” Cautious readers might question my example as being theoretical; while such tests are useful to check grammatical theories, let me provide an actual example from the Hebrew Bible. Jeremiah 1:5b reads נָתַתִּי לְנֹחָם נְבִיא “I have given you <as> a prophet for the nations”; here is the Andersen-Forbes phrase marker:



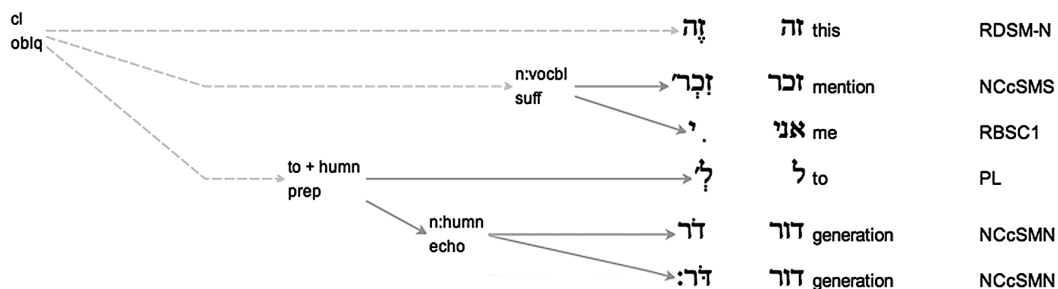
As in 1 Samuel 8:1, we have an object complement (“obj cmp”) consisting of a noun followed by a “to + humn” prepositional phrase. Since such a construction exhibits no verbal characteristic, the occurrence of שְׁפָטִים in 1 Samuel 8:1 should be a “pure noun participle” and not a “noun-verb participle” according to the Andersen-Forbes part-of-speech taxonomy.

After having discussed “Parts of Speech” in Chapter 3, the authors turn to “Phrase Marker Concepts and Terminology” in Chapter 4 (p. 43). They present in detail their graphical representation system and explain the way in which phrase markers were automatically generated using various rules, taking into account semantic information. Of course, the authors are well aware of the limitations of computer parsing — however sophisticated it may be: “Corrections, extensions, and consistency enforcement are the ongoing work of human over-readers” (p. 49). They are also aware that alternative analyses could be offered, especially when the text is ambiguous: “We plan to restore and represent ambiguity in later releases of our data” (p. 45).

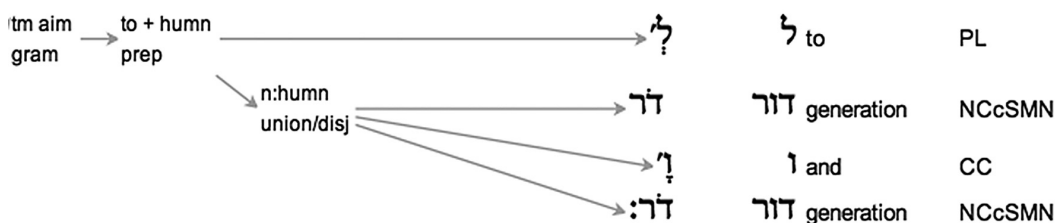
In light of these two limitations, it would be useful for end-users to be able to change a phrase marker if an error is detected or if an alternative parsing is preferred. In fact, alternative parsing would not even need to replace the one provided by the database, since we later learn that the “representational apparatus is designed to allow for multiple parses” (p. 297). Multiple parses would moreover strengthen the reliability of statistical data: I mentioned earlier that giving very precise percentages is deceptive if these figures are inaccurate or subject to variation; taking into account variant parses would lead to a range of percentages and thus to a margin of error. If the margin is too wide, statistics lose their significance; if, on the contrary, the margin is narrow, statistics gain in reliability.

Chapter 5 presents “Basic Phrase Types of Biblical Hebrew” (p. 50). The chapter is well organised, starting with the simplest phrases such as **אִם יַעֲקֹב** “mother of Jacob” (p. 50; note the uncorrected change of Hebrew font in the paragraph). Phrases that merely involve the prefixation of a definite article or the suffixation of pronoun are called “tightly joined phrases” (p. 52). Phrases that exhibit no conjoining are called “unconjoined phrases” (p. 53); they include construct phrases, prepositional phrases, *etc.* Conjoined phrases include coordinate phrases (which the authors call “union or disjoint phrases,” p. 56, to emphasise that coordinating conjunctions can be disjunctive), juxtaposed phrases (when coordination is implicit; *i.e.*, no conjunction is used), and mixed phrases (when more than two elements are coordinated, some but not all with a conjunction).

The authors then focus on juxtaposed phrases in which the elements share an identical reference; for example, **יְהוָה אֱלֹהִים** “Yhwh Elohim” (p. 59). Rather than simply tagging these phrases as “juxtaposed phrases,” a new phrase type was created: “apposition.” If the elements in apposition also exhibit identical form and function (*e.g.*, **מֹשֶׁה מֹשֶׁה** “Moses, Moses”), they are rewarded with a new phrase type called “echo.” While I find it very useful to tag such phrases, the organisation is problematic: syntactically, “echo” phrases are a subset of “apposition” phrases, which are themselves a subset of “juxtaposed” phrases; but in the Andersen-Forbes taxonomy, they are independent. As a result, searching for “juxtaposed phrases” in their database will *not* return “apposition” or “echo” phrases, even though they *are* juxtaposed phrases. Likewise, looking for “apposition” phrases will wrongly exclude “echo” phrases. But that’s not the only problem: if I am interested in the phenomenon of “apposition” (*i.e.*, “a construction wherein two or more constituents have an identical reference,” p. 62), why should I exclude union phrases? The same remark goes for the phenomenon of “echo.” For instance, the end of Exodus 3:15 reads: **וְזֶה יְזַכְּרִי לְדֹר דֹּר** “and this ‘is’ my memorial for generation-generation.” Here is the corresponding Andersen-Forbes phrase marker:



The last two words, *דָּר דָּר*, constitute an “echo” phrase, as expected. Now, let’s look at the second half of Psalms 33:11: *מִן־שָׁבוֹת לִבּוֹ לְדָר דָּר* “The plans of his heart (are) for generation and generation.” Here, *דָּר* is also written twice, but the two occurrences are joined by a coordinating conjunction. Here is the Andersen-Forbes phrase marker:



The phrase is tagged as a “union or disjoint phrase” (*i.e.*, a coordinate phrase), because the two nouns are indeed explicitly conjoined. But the fact that the two coordinated terms are identical is not tagged in any way. The Andersen-Forbes system of phrase types is thus inconsistent: the subset of juxtaposed phrases involving identical terms deserves a specific phrase-type (“echo”), but not the subset of coordinate phrases involving identical terms. This inconsistency would not have occurred if “echo” had not been a phrase type *per se* (after all, these phrases could just be parsed as “juxtaposed phrases” or “union or disjoint phrases” without the need for other phrase types) but rather a tag that can be added to either of these phrase types. Earlier, I mentioned problems with the authors’ part-of-speech system due to its confusion of morphological and semantic features. Similar problems now appear with their phrase-type system due to its confusion of syntactical and semantic features.

The failure to identify variant expressions such as *דָּר דָּר* and *לְדָר דָּר* becomes even more obvious when they appear in a parallel context or, worse, in the same verse. For instance, Samaritan manuscripts read *לְדוֹר דּוֹר* at the end of Exodus 3:15, as opposed to Masoretic manuscripts where there is no ו conjunction. Likewise, the end of Proverbs 27:24 is *לְדוֹר דּוֹר* according to the consonantal text, but the Masoretes read *לְדוֹר וְדוֹר*, adding a ו conjunction. It is unfortunate, as I mentioned earlier, that the database does not take into account those variant readings; but even if we limit ourselves to the Leningrad Codex consonantal text, we could at least expect the database to identify similar cases of repetition (or “echo”), whether the elements are separated by a coordinating conjunction or not.

Phrase types remain the focus of Chapter 6, which deals with “Complex Phrases” (p. 64). As opposed to a basic phrase, whose constituents are segments, a complex phrase has among its constituents at least one phrase. Various subtypes of complex phrases are presented, including rare or

interesting cases. The authors point out “layout engine flaws” (p. 71) — hence the arrows that cross other arrows on a phrase marker (p. 72; see also pp. 77, 78, 79, *etc.*), a problem mentioned again on p. 294. This is a minor issue, and does not affect the value of their database; more problematic is the fact that, quite often, “alternate parses are also defensible” (p. 66). The authors are well aware of this issue: “In the building up of complex phrases, multiple equally valid parses are often possible” (p. 76). One may wonder, then, why they provide tables summing up the number of occurrences for all patterns of coordinated phrases having two or three constituents (pp. 75–76). The apparent precision of those numbers (*e.g.*, 134 S+S+S phrases or 141 PoP+S phrases) is misleading and, until a margin of error can be assessed, these statistics can hardly be trusted.

Having discussed segments and phrases, the authors turn to clauses, divided into “main clauses” (Chapter 7, p. 86) and “embedded clauses” (Chapter 8, p. 98). Interacting with previous (including recent) works in the field, Andersen and Forbes discuss such issues as word order, discontinuity, null anaphora, *etc.* They provide statistical data for the ordering of subject (S), verb (V) and direct object (O): the most frequent sequence appears to be VSO (42.7%) followed by SVO (33.5%) and, at a distance, by VOS (14.4%) and the three other possible sequences (p. 89). As I explained above, it would be important to estimate the margin of error, but the authors are correct in concluding that “the oft-repeated assertion that Biblical Hebrew is a VSO language is an insufficient description” (p. 89). Indeed, SVO clauses are less than 10 points away from VSO clauses. Moreover, *wayyiqtol* or *weqatal* verb forms constrain word order and account for a number of VSO or VOS clauses; they are “anchored” predicators (p. 157). Setting those forms aside, the VSO sequence drops to 30.2% while the SVO sequence rises to first place at 44.8% (p. 89). VOS clauses remain in third position at 12.4%; adding those to the VSO clauses, we get 42.6% of clauses in which V precedes S and O, compared to 47.5% of clauses in which S precedes V and O. In other words, when anchored predicators are set aside, Biblical Hebrew seems *not* to favour V-initial sequence (and VSO in particular).

But these numbers are misleading: their margin of error has not been estimated (V-initial and S-initial clauses are just 5 points away from each other), and they account only for clauses that have both a subject and an object; in order to determine the frequency of S-initial and V-initial sequences, one must take into account clauses without an object. And if V-initial clauses are studied without comparison to S-initial clauses, one must take into account clauses without a subject. It is unfortunate that the authors do not provide these numbers; they do, however, indicate in a footnote (p. 89 n. 18) that “when we examine clauses with unanchored predicator plus either a subject or an object, initial-predicator incidence increases substantially. The VO sequence occurs in 80% of cases, and the VS sequence occurs in 62% of cases.” If actual numbers (rather than percentages) had been provided, cumulative percentages could have been computed and may have proved wrong the impression that Biblical Hebrew does not favour V-initial sequence.

When discussing syntactically discontinuous expressions, the authors give examples of phrase markers exhibiting tangling (pp. 90–91). While I agree that Biblical Hebrew does exhibit discontinuity, this is not true of some of the cases that are given as examples. For instance, 1 Samuel 31:2 is provided as a case of distributed apposition:

אֶת־יְהוֹנָתָן וְאֶת־אֲבִינָדָב וְאֶת־מַלְכִּישׁוּעַ בְּנֵי שָׁאוּל:

“Jonathan and Abinadab and Malkishua, sons of Saul.”

Indeed, **בְּנֵי שְׂאוֹל** refers to **יְהוֹנָתָן**, **אֲבִינֶדָב** and **מְלִכִּי־שׁוּעַ**, and since **יְהוֹנָתָן** is not adjacent, the authors consider it a case of discontinuity. But if **אֶת־יְהוֹנָתָן וְאֶת־אֲבִינֶדָב וְאֶת־מְלִכִּי־שׁוּעַ** are considered a single phrase (more specifically, a complex union phrase), it appears that this phrase is immediately followed by **בְּנֵי שְׂאוֹל**. There is no discontinuity, and no need for tangling.

The same observation can be made for 1 Chronicles 22:13, whose phrase marker fragment exhibits tangling on p. 104. The text reads as follows:

אֶת־הַחֲקִים וְאֶת־הַמִּשְׁפָּטִים אֲשֶׁר צִוָּה יְהוָה אֶת־מֹשֶׁה עַל־יִשְׂרָאֵל

“the precepts and the judgments that Yhwh commanded Moses upon Israel.”

The authors argue that **אֲשֶׁר** refers not only to **מִשְׁפָּטִים** but to **חֲקִים** as well, hence the extraposition (cf. p. 103) and tangling. Yet, by considering the phrase **אֶת־הַחֲקִים וְאֶת־הַמִּשְׁפָּטִים** as the head for the nominalised clause introduced by **אֲשֶׁר**, tangling disappears and, contrary to what the authors believe, the clause is not “inherently extraposed” (p. 104). The irony is that the authors themselves state that numerous cases of extraposition in Holmstedt’s list can be resolved by “allowing phrases to be heads for nominalized clauses” (p. 103). It is very unfortunate that on the following page they present 1 Chronicles 22:13 as one of “94 instances of extraposed nominalized clauses that are not in Holmstedt’s list”!

In the same chapter, the authors discuss “overtly and covertly headed nominalized clauses” (p. 101), “restrictive and nonrestrictive nominalized clauses” (pp. 101–102), and “resumption” (pp. 102–103). These phenomena are illustrated with well-chosen examples and their accompanying phrase markers. I noticed that some of these phenomena do not appear to be tagged in any way in the Andersen-Forbes system. For instance, it would be very useful to improve the taxonomy so as to distinguish between restrictive and nonrestrictive nominalised clauses. As for resumptive pronouns, I was surprised to find out later (in Chapter 9) that Andersen and Forbes tag “resumption” as a special characteristic of some clause constituents (p. 130). Since the authors are well aware of the “resumption phenomena” (p. 102), it seems inconsistent that their suspension/resumption tagging does not apply here (compare phrase markers 8.6 and 9.27, pp. 106 and 131 respectively). Let’s hope that this shortcoming will soon be corrected. Suspension and resumption could even be represented by some kind of tangling in phrase markers: an arrow could connect a resumptive pronoun with the substantive to which it refers.

The issue of tangling also occurs in the discussion of “noun-verb participles” (p. 109); according to the authors, out of the 2,413 occurrences, “29 participles are parts of non-tree phrase markers, 27 having two mothers and two having three mothers” (p. 109). One of these two occurrences is Psalms 106:21–22:

שָׁכְחוּ אֶל־מוֹשִׁיעֵם עֲשֵׂה נִדְלוֹת בְּמִצְרַיִם: גַּפְלֹאוֹת בְּאֶרֶץ חָם נוֹרְאוֹת עַל־יַם־סוּף:

“They forgot El, their savior, doing great ‘deeds’ in Egypt, wonderful ‘deeds’ in the land of Ham, awesome ‘deeds’ upon the Red Sea.”

Their phrase marker exhibits tangling, but this is due to the fact that **עֲשֵׂה** is part of a clause limited to **נִדְלוֹת בְּמִצְרַיִם**. But the clause should rather be extended to the end of v. 22: **עֲשֵׂה** has a threefold complement consisting of three juxtaposed phrases: (1) **נִדְלוֹת בְּמִצְרַיִם**; (2) **גַּפְלֹאוֹת בְּאֶרֶץ חָם**; and (3) **נוֹרְאוֹת עַל־יַם־סוּף**. These phrases exhibit a parallel structure, with an indefinite feminine plural adjective followed by a preposition introducing a toponym. I would even embed

them together into a single phrase that complements עֲשֵׂה (*cp.* the superset node p. 274), but if one wants to separate direct objects from locative adjuncts, it is still possible to represent עֲשֵׂה followed by six constituents (dir obj, adjunct, dir obj, adjunct, dir obj, adjunct) without resorting to tangling.

This, of course, depends on the system adopted for classifying clause constituents, which is the subject of Chapter 9, “Classifying Clause Immediate Constituents” (p. 113). Five CIC subtypes are introduced: impermanents, syntactic isolates, predicators, operators, and grammatical functions and semantic roles. These subtypes are said to be “exhaustive and mutually exclusive” (p. 114), but the name given to the fifth subtype, “grammatical functions and semantic roles,” betrays its hybrid nature. Indeed, whereas some of the CICs will simply be tagged with “grammatical functions,” others will be tagged with “semantic roles.” This is unfortunate, especially since CICs that are tagged with “grammatical functions” do in fact have semantic roles. The authors are aware of this issue: they acknowledge that this is a “mixed representation” that is used “on an interim basis” (p. 115). Yet, it is reminiscent of the issues I highlighted earlier concerning the part-of-speech and phrase-type systems because of their confusion of morphological and syntactical features with semantic features. As we now reach the clause level, it is unfortunate that the author’s taxonomy exhibits a similar flaw. Indeed, at the end of their discussion of “Semantic Role CICs” in Chapter 10 (p. 135), the authors state in a footnote that “assessing the adequacy of our taxonomies of parts of speech and of semantic roles is an iterative process” (p. 150 n. 48).

Having introduced CICs in their various subtypes and semantic roles, Andersen and Forbes focus on their use (including presence and ordering) in clauses featuring a given verb. Chapter 11 (p. 152) illustrates their methods with חִפֵּץ, whose corpus is small, before applying them to very frequent verbs: אָמַר (Chapter 12, p. 170), הָיָה (Chapter 13, p. 186), עָשָׂה (Chapter 14, p. 196), and נָתַן (Chapter 15, p. 207). These chapters are well illustrated, with few typographical errors; for example, the use of a different Hebrew font in tables on pp. 178–179 or in charts on p. 213 (one of which is too pixelated). Numerous syntactical features are mentioned; for instance, “the אָמַר corpus exhibits a strong alternation in realising indirect objects: אֶל (66%) versus לְ (34%)” (p. 173), which is very different from נָתַן, whose “corpus exhibits mild alternation in realizing indirect objects: לְ (91.4%) versus אֶל (4.3%)” (p. 209). Likewise, כֵּן is by far the most frequent adverb of manner used in the אָמַר corpus (p. 174), while the עָשָׂה corpus mostly uses כֵּן (p. 198). The Andersen-Forbes database also shines in identifying deep speech embedding: four-level embedding occurs more than 20 times, while five-level embedding occurs only in Jeremiah, with three occurrences (p. 177).

The statistical results presented in these chapters depend, however, on the reliability of the data and on the adequacy of the taxonomies. The problematic mixed representation of grammatical functions and semantic roles mentioned above quickly resurfaces, which prompts the authors to conclude that this “makes it all the more important that we implement the full representation as soon as possible” (p. 200).

Chapter 16 examines the “Makeup of Clause Immediate Constituent Subtypes” (p. 218) independently of the verb being used, while Chapter 17 introduces methods for “Computing the Distances Between Verb Corpora” (p. 232). The presentation is clear, except for a few font changes on the charts pp. 233ff. More importantly, one should bear in mind that verb clustering derives from, and therefore reflects, the factors used to compute distances between verbs. These factors are in turn related to the part-of-speech, phrase-type and CIC systems. For instance,

VLC (“verbless clauses”) and QV (“quasiverbal clauses”) form a cluster (p. 249) because they share similar syntactical features; indeed, a quasiverbal is by definition “a segment that does not have verb morphology, but functions as a predicator” (p. 368), so that quasiverbal clauses are verbless clauses — especially since Andersen and Forbes conveniently refrain from identifying as “quasiverbals” occurrences of these terms in verbal clauses (see my remarks below). Failing to bear this in mind leads to circular reasoning, as when the authors state in their conclusion: “We find, for example, that the verbless corpus has much in common with the quasiverbal corpus” (p. 250). What appears to be a conclusion derived from the dendrogram is, in fact, the result of the authors’ prior creation of a part-of-speech category defined by such behaviour.

The reason for creating such a part of speech is explained in the following chapter, “The Five Quasiverbals” (p. 251). These five segments are, namely: **שׁ**, **אֵין**, **עוֹד**, **הֵנָּה**, and **אֵיה**. They do not always function as quasiverbals: “Approximately 720 of these lexemes combine with verbal elements to produce compound predicators ... Here we deal with the 1,213 clauses in which these items appear as simple predicators” (p. 251, *sic*; the first sentence should be corrected to something like “720 occurrences of these lexemes”). Indeed, these lexemes will be given various parts of speech depending on their function; hence, **אֵין** is not consistently parsed as the construct state of **אֵין** (see p. 251 n. 8 where these forms, and even the pausal **אֵין**, are presented as “homographs”). This is another example of the problematic part-of-speech system developed by Andersen and Forbes: I used earlier **תּוֹךְ** as an example of a lexeme classified as a “preposition” rather than the construct state of **תּוֹךְ** “midst”; the same problem occurs here. Moreover, just as **תּוֹךְ** had its one-lexeme part-of-speech category, **אֵין** also receives its own one-lexeme part-of-speech category, defeating once again the purpose of creating a category. In fact, each of the five quasiverbals has its own one-lexeme category, but they are not on the same level. For instance, the “**אֵיה** where?” subcategory is on the third level — that of the “Adverbial Subclass,” as seen on Andersen-Forbes database screenshot below:

@A[IQ]i

Part of Speech	Adverbial Family			Adverbial Subclass	
Adverbial	“Above” (מַעַל)	“Now” (עַתָּה)	“Together” (יחדיו)	“Behold!” (הִנֵּה)	“Who?” (מִי)
Conjunction	“Afterwards” (אַחֵר)	“Only” (אֶל)	“Underneath” (מִשָּׁה Or מִתַּחַת)	“Do Not” (אַל)	“Why?” (מַדּוּעַ)
Noun	“Again” (עוֹד)	“Only” (רַק)	“Upwards” (מִמַּעַל)	“Exists” (יש)	“Yes Or No?” (ה)
Preposition	“Already” (כְּבָר)	“Positively” (אַפְתָּם)	“Very” (מְאֹד)	“How?” (אֵיךְ)	Temporal
Pronoun	“Apart” (לְבַד)	[Question] (אִם)	“Yet” (עַד)	Negation (בְּלִי)	
Verb	“Back” (אָחֹר)	“Quickly” (רַשָּׁ) (חֵישׁ)	Emphatic	“Not” (לֹא)	
Miscellany	“Certainly” (לֵא)	“Still” (עוֹד)	Interrogative	“Not Exists” (אֵין)	
	“Eagerly” (אַסְפָּרָגָא)	“Suddenly” (פְּתָאִם)	Modal	“Still” (עוֹד)	
	“Farther” (הֶלְאָה)	“Then” (אַפּוּא)	Negative	“What?” (מָה)	
	“Here” (הֵנָּה)	“Then” (אָז Or אֵדִין)	Quasiverbal	“When?” (מִתְנִי)	
	“Inadvertently” (הֶצְנָא)	“There” (שָׁם)		“Whence?” (מֵאֵין)	
	“Not Yet” (טָרָם)	“Thither” (שָׁמָה)		“Where?” (אֵיה)	
	“Now” (טָרָם)	“Thus” (כֵּן Or כֹּה)		“Where?” (אֵנָה)	

Surprisingly, the occurrences of this one-lexeme adverbial subclass do not belong to the “Quasiverbal” adverbial family, but to the “Interrogative” adverbial family. **עוד**, on the other hand, does not appear only as an “עוד *still*” adverbial subclass: it also appears as the “עוד *again*” adverbial family, and again as the “עוד *still*” adverbial family, as the following screenshot indicates:

@A[zsQ]S

Part of Speech	Adverbial Family			Adverbial Subclass	
Adverbial	“Above” (מַעַל)	“Now” (עַתָּה)	“Together” (יחדו)	“Behold!” (הִנֵּה)	“Who?” (מִי)
Conjunction	“Afterwards” (אַחֲרַי)	“Only” (אֲדָם)	“Underneath” (מִתַּחַת Or תַּחַת)	“Do Not” (אַל)	“Why?” (מַדּוּעַ)
Noun	“Again” (עוֹד)	“Only” (רַק)	“Upwards” (מִמַּעַל)	“Exists” (יֵשׁ)	“Yes Or No?” (הֵן)
Preposition	“Already” (כְּבָר)	“Positively” (אֶפְתּוֹם)	“Very” (מְאֹד)	“How?” (אֵיךְ)	Temporal
Pronoun	“Apart” (לְבַד)	[Question] (אִם)	“Yet” (עַד)	Negation (בְּלִי)	
Verb	“Back” (אָחֹר)	“Quickly” (חֵישׁ)	Emphatic	“Not” (לֹא)	
Miscellany	“Certainly” (לֵא)	“Still” (עוֹד)	Interrogative	“Not Exists” (אֵין)	
	“Eagerly” (אֶקְפָּרָנָא)	“Suddenly” (פְּתָאִם)	Modal	“Still” (עוֹד)	
	“Farther” (הַלְאָה)	“Then” (אַפּוּא)	Negative	“What?” (מָה)	
	“Here” (הִנֵּה)	“Then” (אָז Or אֵין)	Quasiverbal	“When?” (מָתַי)	
	“Inadvertently” (הַצֵּדָא)	“There” (שָׁם)		“Whence?” (מֵאֵין)	
	“Not Yet” (טָרָם)	“Thither” (שָׁמָּה)		“Where?” (אֵינָה)	
	“Now” (טָרָם)	“Thus” (כֵּן Or כֹּה)		“Where?” (אֵינָה)	

As a result, searching for the “עוד *still*” adverbial subclass will *not* include the occurrences of **עוד** belonging to the “עוד *still*” adverbial family. This behaviour is inconsistent with that of the “אֵינָה *where?*” adverbial subclass. As for הִנֵּה, not only will the “הִנֵּה *behold!*” subclass *not* include occurrences that do not belong to “Quasiverbal” family, but those other occurrences are not rewarded with a(nother) single-lexeme category. They are not even found within the “Adverbial” top category; one must look for the “Exclamation” subclass within the “Miscellany” category. In fact, they are even said to represent another lexeme altogether. This is acknowledged in a footnote: “We split the forms into three homographs: a spatial adverb (glossed ‘here’, 268×), an exclamative (glossed ‘behold!’ 19×), and a quasiverbal (glossed ‘behold’, 912×)” (p. 252 n. 23). This assertion is problematic on more than one account: the exclamative and the quasiverbal forms seem to be as different from each other as the spatial adverb, whereas in reality there are only two forms, הִנֵּה “here” and הִנֵּה “behold.” The so-called third homograph is in fact the result of the authors’ desire to distinguish between two uses of הִנֵּה “behold.” Creating a new lexeme is both artificial and misleading, as it will affect all searches involving הִנֵּה.

Surprisingly, the authors elsewhere add to the occurrences of **יֵשׁ** those of **אֵינָה**, a lexeme found in the Aramaic portions of the Bible. Does this mean that Aramaic is part of Biblical Hebrew? The authors even add: “We observe that the Aramaic form is preceded by **לֹא** ‘not’ six times” (p. 255 n. 49). This, of course, is wrong: in these six occurrences, **אֵינָה** is preceded by **לֹא** and not by **לֹא**. Aramaic is *not* Hebrew, and the fact that the books of Daniel and Ezra contain Aramaic portions does not justify their use for the study of the Hebrew language, unless one studies the affinities and influences of these two related languages. Earlier, I deplored the fact that the authors

excluded other biblical manuscripts and variant readings; I now have to deplore their inconsistency in including Aramaic data.

Having conveniently excluded occurrences of עֹד, הִנֵּה, or אִיה that do not fit the desired behaviour (either by assigning them another part of speech or by creating another lexeme altogether), the authors present bar charts for each of them, and the resulting dendrogram highlighting their affinities. Andersen and Forbes see it as a proof that these five lexemes should be grouped together, as stated in their conclusion: “As far as we know, our work is the first time that these 5 lexemes have been grouped together as a distinct part of speech” (p. 260). As mentioned above, this is a classical case of circular reasoning. In fact, despite the authors’ efforts to exclude unwanted occurrences, the dendrogram nonetheless shows that these five lexemes *do* exhibit different behaviours, except for יָשׁ and אֵין, whose affinities as existentials have long been recognised by grammarians. So much for the “quasiverbal” category.

Chapter 19 deals with “Verbless Clauses” (p. 261), which are believed to exhibit a number of properties listed on pp. 262–263. The first feature states that verbless clauses (VLCs) are bipartite; that is, that they contain two CICs. According to the authors, however, only 57% of VLCs have just two CICs, which challenges the “reigning paradigm” of analysing verbless clauses as “subjects and predicates” (p. 263). In reality, the number of CICs depends on how they are parsed. Examples given on pp. 274–275 illustrate this fluctuation well: in Jeremiah 1:1, the expression הַכֹּהֲנִים אֲשֶׁר בְּעֵנְתוֹת בְּאֶרֶץ בִּנְיָמִן “the priests that (are) in Anathoth, in the land of Benjamin” features two parallel phrases that should be combined into one CIC; however, these phrases were initially parsed in the Andersen-Forbes database as two independent CICs. Likewise in Song 2:14: יוֹנָתִי בְּהַגְיֵי הַסֵּלַע בְּסִתְרֵי הַמְּדִרְגָּה “My dove, in the clefts of the rock, in the covert of the cliff”; the two parallel phrases (= preposition ב + hiding place in construct state + location preceded by definite article) should be combined.

Since the number of CICs in a verbless clause depends on their parsing, the authors’ initial statement that only 57% of VLCs have two CICs is just inaccurate, and the mention of exact numbers (“5,453” clauses out of “9,500”) is deceptive. Yet, the authors organise the rest of their chapter according to the number of CICs: § 19.9 (p. 275) deals with one-CIC verbless structures and clauses; two-CIC VLCs are discussed § 19.10 (p. 283), followed by three-CIC VLCs in § 19.11 (p. 287) and, finally, multi-CIC VLCs (§ 19.12 p. 290). Such an organisation is questionable given the unreliability of the number of CICs per clause. The authors are aware of this problem and admit that “the grouping of verbless clauses by number of CICs is not precise” (p. 275); why, then, did they organise the rest of their chapter according to the number of CICs, giving specific numbers (e.g., “1,466 one-CIC verbless structures”; “5,320” two-CIC VLCs; “1,534” three-CIC VLCs; “349” four-CIC VLCs, *etc.*)?

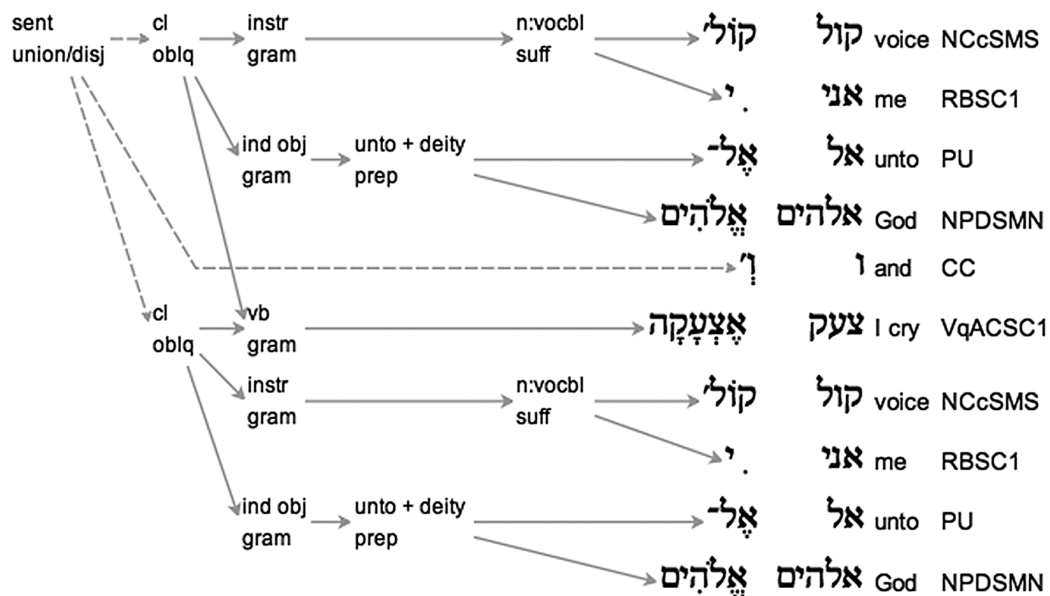
An example of a four-CIC VLC is given on p. 290: וְכָל־שָׂרָץ הָעוֹף טָמֵא הוּא לָכֶם “and all the swarm of the winged-animals, it is unclean to you” (Deuteronomy 14:19). However, this clause may be seen as bipartite, with a subject (כָּל־שָׂרָץ הָעוֹף) and a predicate (טָמֵא הוּא לָכֶם). It is unfortunate that the Andersen-Forbes phrase marker does not “visualize” this structure, and it is even more unfortunate that the authors fail to realise that a bipartite clause does not necessarily correspond to what they call a two-CIC clause. In their conclusion, they condemn the “binarism of the prevailing definitions of VLC” since “we have seen, however, that Biblical Hebrew contains

VLCs with as many as ten CICs” (p. 291). I could include here a discussion of the alleged ten-CIC VLCs, but it would only confirm that: (1) the number of CICs depends on parsing and can often be reduced; (2) a bipartite clause is *not* necessarily a two-CIC clause given the limitations of the Andersen-Forbes CIC system.

The final chapters focus on more complex structures such as non-tree phrase markers and supra-clausal structures. Chapter 20 (p. 294) gives cases of discontinuity and multiple mother constructions, such as construct participles, distributed apposition or ellipsis. I’ve already discussed construct participles and distributed apposition, so let’s look at an example of backward ellipsis given on p. 308, taken from Psalm 77:2:

קולי אל־אלהים ואצעקה קולי אל־אלהים

The authors note that “the two clauses are identical except for the verb” (p. 309) and thus conclude that the verb in the second clause is a case of backward ellipsis. Here is the corresponding phrase marker:



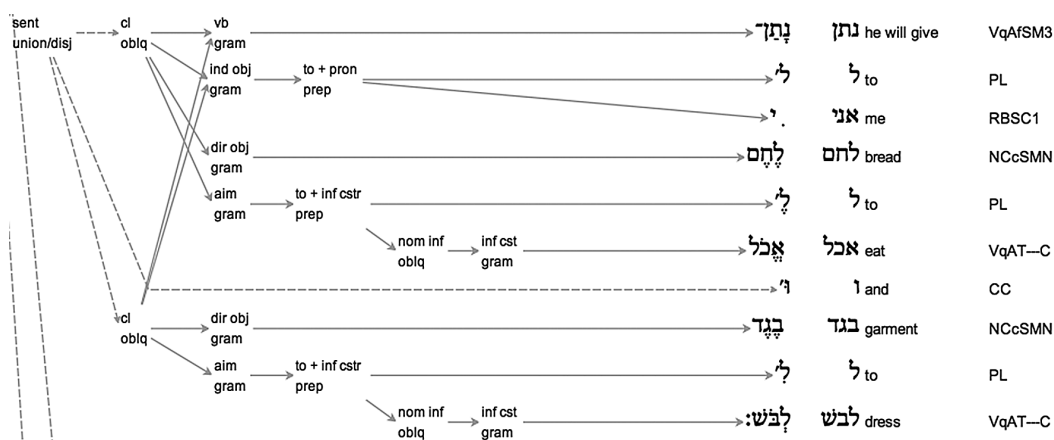
Unfortunately, this parsing is wrong in multiple places. First, the second clause is not *ואצעקה קולי אל־אלהים* “I cry <with> my voice unto Elohim”; taking into account the end of the verse (*והאזין אלי*), which also contains a verb introduced by *ו*, we realise that *ואצעקה* must be disconnected from *קולי אל־אלהים*, which in turn becomes an echo of the first clause. Moreover, in the first and (now) third clause, *קולי* is not an instrument CIC, but the subject of the verbless clause. The four clauses form two pairs: verbless / verb // verbless / verb. The two pairs are juxtaposed, while the two clauses inside each pair are coordinated by *ו*. Moreover, the first clause in each pair is identical. Here is a literal translation showing the structure:

קוֹלִי אֶל־אֱלֹהִים וְאֶצְעָקָה קוֹלִי אֶל־אֱלֹהִים וְהִאֲזִין אֵלַי:

“My voice ‘is’ unto Elohim, and I want to cry; my voice ‘is’ unto Elohim, and he will listen to me.”

Note that the *atnāḥ* confirms this structure; it is thus all the more surprising that the authors failed to recognise its pattern. Now, the BHS apparatus notes that some Hebrew manuscripts do not have a ו conjunction before אֶצְעָקָה, which is reflected in ancient versions such as the Old Greek. In that case, a point could be made for parsing קוֹלִי אֶל־אֱלֹהִים אֶצְעָקָה as a single clause: “‘With’ my voice unto Elohim I want to cry.” This is what the Greek version does: Φωνῇ μου πρὸς κύριον ἐκέκραξα (note the dative Φωνῇ). But since the authors insisted that “Biblical Hebrew” is, in their terminology, limited to the Leningrad Codex (see my comments earlier) and that variant readings are not taken into account, their parsing should indeed reflect the text of the Leningrad Codex. Moreover, their parsing system could be improved so as to reflect the phenomenon of “echo” exhibited by the first clause of each pair (see my comments earlier on the “echo” phenomenon).

The following example on p. 309, borrowed from Genesis 28:20, is given as a case of “multiple ellipsis”:



As the phrase marker indicates, the authors believe that “both the verb and the indirect object are ellipsed.” Indeed, they parse *וְהָאֵלֹהִים אָכַל* as a separate clause introduced by ו, a reading that fails to see the parallel structure between *וְהָאֵלֹהִים אָכַל* and *וְהָאֵלֹהִים אָכַל* (= an absolute noun followed by an infinitive construct introduced by ל). The ו conjunction coordinates those two phrases — not what the authors parse as two clauses. What we have here is, in fact, a single clause made up of a verb, *וְהָאֵלֹהִים אָכַל*, followed by an indirect object, *וְהָאֵלֹהִים אָכַל*, and a direct object made up of two union phrases, *וְהָאֵלֹהִים אָכַל* and *וְהָאֵלֹהִים אָכַל*. This is *not* a case of multiple ellipsis; in fact, this is not a case of ellipsis *at all*.

I mentioned earlier that the authors did not pay attention to the position of the *atnāḥ* in Psalms 77:2. This question is dealt with in Appendix 1, “Text Choice, Corrections, and Reductions” (p. 326). The authors state that, in the early development stages of their work, they “experimented

with the *atnāḥ* as the most likely to assist in the mapping of clause boundaries, since at least in poetic texts it divided many one-bicolon verses into two clauses” (p. 330). They nonetheless decided to ignore these cantillation marks, except at the segment level (for instance to distinguish וְהָיָה “she is coming” from וָהָיָה “she came”). They conclude by stating: “Pause is purely elocutionary, and its significance for grammar is minimal” (p. 333). As the example in Psalms 77:2 has made clear, however, this is simply not true. In fact, cantillation marks are an integral part of the Masoretic tradition; it seems quite inconsistent, therefore, to opt for a study of Biblical Hebrew in this single tradition — at the expense of others texts such as the Dead Sea Scrolls or Samaritan manuscripts — while depriving it of some of its major components. If pauses in the Masoretic traditions are not to be trusted, why should vowels be different?

To sum up my reflections, the Andersen-Forbes system is problematic at all levels. The textual basis excludes the most ancient witnesses while setting aside Masoretic *Qere* variants and even cantillation marks, against principles of corpus linguistics — which the authors nonetheless claim to adopt.

At the segment level, the Andersen-Forbes system is inconsistent in ligaturing words to form new segments while maintaining the division of other words. It artificially creates homographs and multiplies the number of part-of-speech categories. Many categories contain a single lexeme *by design*, which defeats the purpose of creating a taxonomy. Moreover, single-lexeme parts of speech are not all on the same level, as seen with the so-called quasiverbals, whereas semantic features are sometimes mixed in the part-of-speech system.

Several phrase types are also created on the basis of semantic features, but without consistency, as seen in the “apposition” and “echo” phrase types. Moreover, alternate parses are often possible, which undermines the reliability of the statistical data provided throughout the volume; the precision of these numbers is deceptive because they are not accompanied with their margin of error, against fundamental principles of statistical analysis.

The CIC-type taxonomy, like the part-of-speech taxonomy and the phrase-type taxonomy, mixes syntactical and semantic features, which affects subsequent syntactical analyses and studies. Various problems arise, including circular reasoning.

Although the Andersen-Forbes system aims at “visualizing” grammar (as emphasised in the volume title), it fails to identify obvious parallel structures in phrases and clauses, while obscuring phrase markers with unnecessary (and sometimes incorrect) tangling.

These drawbacks should not, however, eclipse the potential value of the Andersen-Forbes system. I know of no other Biblical Hebrew database that contains so many grammatical and semantic features. In this article, I have expressed concerns about its underlying linguistic theories and suggested ways of improvement which, I hope, will be addressed in a future version of their database.

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Mathematical Rigour and Scholarly Intuition

Some Reflections on Andersen's and Forbes' *Biblical Hebrew Grammar Visualized*

Wido VAN PEURSEN

Francis I. Andersen and A. Dean Forbes, 2012. *Biblical Hebrew Grammar Visualized*. (Linguistic Studies in Ancient West Semitic 6). Winona Lake, Indiana: Eisenbrauns. xvii + Pp. 394. Hardback. ISBN 978-1-57506-229-7.

Introduction

Whoever consults a bibliography of Biblical Hebrew will find many 'Andersen–Forbes' titles. In addition to books and journal articles, there is also an Andersen–Forbes database and an Andersen–Forbes website (<http://andersen-forbes.org>). Nevertheless, 'Andersen–Forbes' refers to two persons, living in different parts of the world, with different academic backgrounds and careers. For almost half a century, they have joined forces and combined their expertise in a fruitful and truly interdisciplinary way.

When 'Bible and Computer' emerged as a new field of expertise in the 1970s, they were among the pioneers. They contributed to the first conference of the *Association Internationale Bible et Informatique* in Louvain-la-Neuve in 1985, presenting a project that had started as early as 1970. They have been active in this field since then. Now, in the second decade of the 21st century, they present a *magnum opus* that gives us an insight into the work they have been doing over the decades.

I have the privilege to be the successor of another pioneer in the field of Bible and Computer, Eep Talstra, who also started with the creation of a database of the Hebrew Bible in the 1970s and whose work is now continued in the *Eep Talstra Centre for Bible and Computer* (ETCBC). From the perspective of another research institute that focuses on the computational analysis of the Hebrew Bible, I look with admiration upon the pioneering work that Andersen and Forbes have done and feel affinity with their attempts to cultivate the open area of Bible and Computer. I therefore gratefully accept the invitation to share with the *ANES* readers some of my reflections on their important study.

I will not give a full review of the book and all the topics it deals with, but I will give some thoughts on the theoretical and methodological choices that the authors have made and discuss some of the issues that I regard as Andersen's and Forbes' major contributions to Biblical Hebrew and general linguistic studies. At times I will make a comparison with the work that is done by the ETCBC.

Structure of the Book

After four introductory chapters, the major parts of the book are devoted to phrases (chapters 5–6), clauses (chapters 7–8) and Clause Immediate Constituents or CIC's (chapters 9–17). CIC's are the components from which a clause is composed, such as subject and object.

The structure of the book reflects a hierarchy of constituents from the smallest building blocks up to higher linguistic levels (cf. p. 62). The smallest linguistic unit that Andersen and Forbes distinguish is the 'segment', which is "a word, part of a word, or sequence of words that is an ultimate constituent in [the] syntactic analysis" (p. 368). The segment is also the unit to which part of speech (extensively discussed in chapter 3; see below) is assigned.

The authors prefer the 'segment' to the morpheme as the basic constituent of syntactic constructions, because many morphemes are "discontinuous and interdigitated" and hence, according to Andersen and Forbes, 'it would be fruitlessly complicated' to make them the basic constituents (p. 339). They refer to such phenomena as the roles of vowel patterns and roots in word formation and the combination of prefixes and suffixes to mark person, number and gender in verb forms.

'Word' is not a useful category either, because the authors define it as a unit between spaces, "an arbitrary orthographic unit that is traditionally used by scribes in manuscripts and by printers in editions of the Hebrew Bible." (p. 370). Due to this graphic, rather than functional definition of a 'word', combinations of, for example, a proclitic preposition and a noun, or a finite verb with an object suffix are counted as one word.¹

The segments are the building blocks of phrases. Chapters 5–6 discuss how these building blocks are combined in basic phrases up to longer and more complex structures. To the more complex structures belong, for example, the extended coordinated phrase "heifer / 3-year-old one / and / she-goat / 3-year-old one / and / ram / 3-year old one / and / dove / and / pigeon" (Genesis 15:9; p. 78).

The chapters on clauses follow a similar procedure, from simple basic types to more complex structures involving expansions and embedding. After the discussion of segments, phrases and clauses, some chapters are devoted to quasiverbals (chapter 18), verbless clauses (chapter 19), non-tree phrase markers (chapter 20) and supra-clausal structures (chapter 21).

Morphemes, Segments and Words

The structure of the book and the organisation of its chapters reflect Andersen's and Forbes' major choices regarding language structure, analytical procedures, categories and terminology. If I compare the choices that Andersen and Forbes have made with the decisions taken in the ETCBC, the main difference concerns the identification of the basic units. In the ETCBC database, we encode morphemes rather than tagging words or 'segments'. Thus rather than tagging a 'perfect 3rd pers. masc. sing. Qal', it is the computer program that produces such an analysis

¹ Consequently they count 300,000 words in the Bible (p. xi), rather than 420,000 (when a functional definition of 'word' is used); cf. Jenner, Van Peursen and Talstra 2006, p. 27.

on the basis of a combination of (a) the morphemes identified in the word segmentation and (b) grammatical information which is stored in auxiliary files. Admittedly, this approach has to face the challenges of non-concatenative morphology and other complexities mentioned by Andersen and Forbes: however, it has also methodological advantages and produces interesting linguistic insights. One of the methodological advantages is that the observations that led to a certain analysis can always be retrieved.² To the linguistic advantages belong a better insight into the mechanisms that are at work in the formation of verbal stems and the productivity of the morphemes by which they are formed.³

Regarding the level of morphemes / segments / words, another major difference between the authors' approach and that of the ETCBC concerns the role of the word. The ETCBC model defines a word at the functional level as 'a single lexeme with its inflectional affixes'.⁴ In this functional definition each realisation of a lexeme is considered a word, regardless of whether it is a clitic connected to another word. However, since the functional definition of 'word' in the ETCBC model agrees with the notion of 'segment' in the Andersen-Forbes model, this difference between the two models is mainly one of definition. It may become relevant, however, when the relation between syntax and lexicography and between words and lexemes is described. In dictionaries of Biblical Hebrew the lexeme status of proclitic conjunctions and prepositions (not regarded as "words" by Andersen and Forbes) is recognized by the fact that they receive their own dictionary entries. However, the dictionaries are inconsistent in this respect, because there is a remarkably persistent practice whereby proclitics such as the conjunction *w-* and the prepositions *b-*, *k-*, *l-* are included in the dictionaries, whereas the so-called pronominal suffixes such as *-w*, *-k* are not.⁵

Regarding the structures that are built from the building blocks (phrases, clauses, texts) I see a shared concern between Andersen and Forbes and the ETCBC to proceed from the smaller units to the larger units and a shared interest in the patterns that are actually attested in the corpus, including cases of complex structures, ellipsis and discontinuity.⁶

Studying Biblical Hebrew Grammar

Biblical Hebrew Grammar Visualized accepts "the challenge [...] to study the entire text of the Hebrew Bible, at every level of grammatical organization, from phoneme to discourse, as completely as possible" (p. xi). The authors correctly observe that "traditional Hebrew grammars have limited treatments of the internal syntax of whole clauses. The literature provides very few principled, systematic, exhaustive accounts of the grammatical functions and relations operating among all of the constituents in the complete clauses of Biblical Hebrew in all their variety." (p. 8)

² Van Peursen 2007, p. 159.

³ Cf. Dyk 2006, pp. 133–142. At the levels of phrase and clause structure and text hierarchy the same principle helps identify the carriers of information and establish networks of patterns in texts, such as valence patterns and participant reference; cf. Talstra 2014.

⁴ Bosman and Sikkil 2002, pp. 114–115.

⁵ Sikkil 2008.

⁶ For an attempt to make such a distributional analysis of phrases in the Syriac translation of Ben Sira see Van Peursen 2007, pp. 183–278.

Leading grammar books of Biblical Hebrew show ‘no interest in topics such as transitivity or valence in the perspective of the relations of a verb to all the other clause immediate constituents in its clause’ (p. 8). The authors fill this gap by means of their computational corpus-based analysis of the Hebrew Bible.

Between Corpus Linguistics and Generative Grammar

Andersen and Forbes indicate their own position in relation to modern linguistics as follows:

With regard to modern linguistics, we are eclectic. We ally ourselves with corpus linguistics but also find much of value in the work of the generativists, especially generalized phrase structure grammar. We reject the notion of the autonomy of syntax and bring in semantics and discourse analysis as needed. We iteratively rely on both bottom-up and top-down analyses. (p. 14)

The authors are indeed eclectic, but they also have some strong preferences and dislikes. At the outset, they present their position as anti-Chomskyan. They reject Chomskyan linguistics for, among other things, its high appreciation of rationalism over empiricism, its reliance on competence rather than on performance, and its focus on deep structure, rather than surface structure (pp. 5–6).

In spite of their rejection of Chomskyan linguistics, the authors express their appreciation for Generative Grammar. In summarising their own approach they claim that they ‘find much of value in the work of the generativists’. One of their main resources for linguistic theory is Phrase Structure Grammar, which is “a form of generative grammar consisting only of phrase structure rules. Hence any grammar which assigns to sentences a type of structure that can be represented by a single phrase structure tree.” (p. 6).

The authors’ appreciation for Generative Grammar is also apparent from the “visualization” mentioned in the book title. Even a first glance at the book shows that to Andersen and Forbes “visualization” basically means: building trees. Admittedly, the use of trees for the representation of linguistic structures is not exclusively Chomskyan, and occurs also in linguistic schools of thought that are the opposite of Chomskyan linguistics, such as Construction Grammar and Data-Oriented Parsing.⁷ However, by their use of trees — for which they use the typically Chomskyan designation “phrase markers” (p. 10) — as the main means to investigate linguistic structures at phrase and clause level, the authors accept more deeper structure in their database than their initial refutation of the Chomskyan focus on deep structure may have led the reader to expect.

After their fierce rejection of Chomsky’s focus on deep structure and on rationalism (rule-based) rather than empiricism (data-driven), their appreciation for Generative Grammar and Phrase Structure Grammar comes a bit unexpected. Generative Grammar is, at least to some extent, by definition rule-based and building trees implies at least some type of deep structure. This invites us to take a closer look to discover where Andersen and Forbes’ approach differs from Chomskyan linguistics.

⁷ See, for example, Roorda *et al.*, forthcoming, section 5.

Nonconfigurationality

Andersen and Forbes' debate with Chomskyan linguistics is related to the specific characteristics of Biblical Hebrew. Some languages better fit Chomskyan linguistics than others. "A serious impediment to the transformationalists' quest for Universal Grammar" are nonconfigurational or fluid languages. The authors quote D. Crystal for the distinction between configurational languages, which have "a fairly fixed word-order and hierarchical constituent structure", and nonconfigurational languages, which exhibit "fairly free word-order and seemingly 'flat' constituent structure". Biblical Hebrew meets the three characteristics of nonconfigurational languages (as defined by K. Hale): it has a free word order, discontinuous constituents, and frequent use of zero anaphora.

Because of the nonconfigurationality of Biblical Hebrew, Andersen and Forbes allow their trees to be built in ways that Chomskyan linguists would reject immediately. Thus in the case of discontinuous constituents, the edges are allowed to cross. In some other cases a daughter is allowed to have multiple mothers. This happens with participles in the construct state or in constructions where a constituent is in apposition to two or more earlier constituents (e.g. "Jonathan and Abinadab and Malkishua, sons of Saul"; 1 Samuel 31:2).⁸

The nature of Biblical Hebrew as a nonconfigurational language also motivates the authors' preference for Lexical Functional Grammar (LFG) in their analysis of phrase structure, and for Van Valin's Role and Reference Grammar (RRG) in their clause level analysis. LFG "has had particular success with nonconfigurational languages, languages in which the relation between structure and function is less direct than it is in languages like English." (p. 12). RRG is described as a linguistic theory of clause structure that "[is] equally applicable to free-word-order, flat-syntax languages (...) head-marking languages (...) and to fixed-order configurational, dependent-marking languages like English and Icelandic" (p. 161, quoting Van Valin).

Building Trees and Linguistic Theory

When building the ETCBC database, Eep Talstra tried to avoid tree building, because of the theory of grammar that trees by definition presuppose. To him, the main task of a linguistic database of an ancient language is the registration of patterns and sequences. Others have built upon his database by more generative approaches to Biblical Hebrew⁹ or have used the linguistic data of the ETCBC for generating trees.¹⁰

It seems to me that Talstra, influenced by the form-to-function approach of J. Hoftijzer, W. Richter and G. Khan, is more reluctant to use linguistic theory than Andersen and Forbes.

⁸ In the ETCBC database a distinction is made between the distributional analysis, identifying phrase 'atoms', on the one hand, and the functional analysis, identifying grammatical relations, on the other. Cf. Talstra and Sikkink 2000, p. 48: Dieses Verfahren erlaubt die korrekte Beschreibung eingeschobener Elemente (embedding) und dadurch entstehender Lücken (gapping) in funktionalen Einheiten: während Atome stets lineare, ununterbrochene Wortfolgen sind, lassen die aus ihnen zusammengesetzten funktionalen Einheiten Lücken bzw. Einschübe zu."

⁹ See, for example, Dyk 1994, which is couched within the framework of the Government and Binding theory of syntax and Winther-Nielsen 1995, which applies Rhetorical Structure Analysis.

¹⁰ See, for example, section 5 of Roorda *et al.*, forthcoming.

However, the ETCBC, too, has its challenges in terms of how far one can get with a purely data-driven approach, to what extent such an approach is possible, and whether and how pre-suppositions about deep structure can be avoided when analysing the surface structures. On an earlier occasion we had an excellent opportunity to share these struggles with Dean Forbes and compare the approach taken by Andersen and Forbes with the model underlying the ETCBC database.¹¹

Since both approaches attempt to be primarily data-driven rather than theory-based, a comparison between them shows that the alternatives of rule-based (rationalism) versus data-driven (empiricism) and of deep structures versus surface structure are not just a matter of either/or. These alternatives can rather be seen as the extremes on a sliding scale. However data-driven one wants to be, at some point theoretical assumptions come in. Likewise, regardless of how much one tries to focus on surface structures, at some point in the interpretation of these structures, implicit or explicit ideas about the underlying deep structure come in. Choices made in the corpus linguistics approach of the Hebrew Bible reflect one's position on this sliding scale. If I had to locate the ETCBC's positions on this scale, I would say that the ETCBC is somewhat more reluctant to give in to rules and deep structures and hence tending toward the side of 'data driven' and 'surface structure'.

The Role of Syntax

Contrary to both generative and structuralist grammarians, Andersen and Forbes reject the 'doctrine' of the autonomy of syntax (p. 7). They describe their own approach as follows:

As needed, we bring morphology, semantics, discourse analysis, and world knowledge into our analysis of Biblical Hebrew. Thus, our procedures involve bottom-up syntactic analysis as far as it will take us, but we also engage in top-down analysis when only that enables what seems to be a proper over-all analysis.

I agree that syntax alone is not enough. The disambiguation of multi-valent syntactic structures requires the functional analysis of their semantic relations, even if one gives, as Talstra does, explicit priority to syntax over other areas of linguistic inquiry.¹² However, too much reliance on semantics and world knowledge weakens the rigour of linguistic analysis that the computer enables us to perform.

Here again, a comparison with the ETCBC database may be instructive. The ETCBC takes its starting point in the so-called form-to-function approach to Biblical Hebrew as developed by Hoftijzer, Richter and Khan (see above). In the ETCBC model, syntax has the priority over other aspects of linguistic analysis, even though the role of the latter is not denied. The form-to-function approach "implies that (a) a clear dichotomy is drawn between the structure of a syntactic construction on the one hand and its function on the other and that (b) the analysis starts with observations of regularities in form, before any functions are assigned."¹³

¹¹ Bosman and Sikkil 2006, 2006a; Forbes 2006.

¹² Van Peursen 2007, p. 145.

¹³ Van Peursen 2007, p. 140.

This starting point in the form-to-function approach by itself assigns a leading role to syntactic analysis over other types of linguistic inquiry:

The concentration on the formal properties of a language implies that the syntactic analysis of forms and patterns comes prior to the functional analysis of their semantic relations.¹⁴

So, yes, Andersen and Forbes are right in their claim that just studying syntax without any reference to semantics is impossible. What I miss, however, in Andersen and Forbes' discussion is a systematic account as to how syntax, morphology and semantics, discourse analysis and world knowledge should be combined and whether they acknowledge any procedural or hierarchical order regarding the role they play in the analysis. Does "no autonomy" also imply "no priority"?

Part of Speech Labels

One of the topics that Andersen and Forbes have intensively studied over the decades is the taxonomy of Parts of Speech (POS), which they define as "the grammatical classes or grammatical categories of segments" (p. 367). They distinguish seven major categories, belonging to three main classes:

- A. Particles: 1. Miscellany. 2. Prepositions. 3. Conjunctions.
- B. Adverbials and Substantives: 4. Adverbials. 5a. Substantives.
- C. Substantives and Verbals: 5b. Substantives. 6. Substantives-Verbals. 7. Verbals.

Of these seven categories, the sixth is a mixed one, covering various types of verbal nouns. They further divide the adverbials into a. modals; b. adverbs; c. negatives; d. closed interrogatives; e. open interrogatives; the substantives into a. open interrogatives (other than the adverbial interrogatives); b. pronouns; c. proper nouns; d. other nouns; and the verbals into a. quasiverbals and b. verbs. These subdivisions result in a total of 15 categories. Further subdivisions finally lead to 76 POS labels.

Acknowledging the principle that "it is easy to collapse categories mechanically but impossible to expand them automatically",¹⁵ it is hard to object to this high number of POS labels. Applying all these labels, however, forces one to include various shades of meaning and functional subtleties that resist a systematic registration on the basis of formal criteria. It means a departure from rigour towards sensitivity. As Bosman and Sikkel say in response to Forbes: "It is undoubtedly true, that collapsing a list of categories is easier than expanding it. A short list, however, makes it easier to assign the categories based on a formal analysis of the distributional data."¹⁶

Bosman and Sikkel refer to the example given by Forbes in the contribution to which they respond: the participle. Andersen and Forbes distinguish four gradient types of participles: 1. Pure Noun. 2. Pure Verb. 3. Noun-Verb. 4. Noun-Verb & Noun.¹⁷ Bosman and Sikkel argue that this

¹⁴ Van Peursen 2007, p. 144.

¹⁵ Forbes 2006, p. 125.

¹⁶ Bosman and Sikkel, 2006a, p. 132.

¹⁷ Forbes 2006, p. 126; see also pp. 32–35 of the book under review.

should not result in four different POS labels, because morphologically the participle has a nominal ending, even though it can perform various nominal/verbal functions.¹⁸ To keep the morphological analysis and the functional interpretation apart, the ETCBC model distinguishes between a word's initial or 'default' POS and its phrase-dependent POS. Thus in some cases the participle may have the phrase-dependent POS 'noun', whereas in other cases it functions as a verb.¹⁹

Rigour and Intuition

This brings me to a general observation, to which I refer in the title of this contribution. When one starts reading Andersen and Forbes' introduction, one is struck by the rigour with which the discussion is conducted. The presentation is rigid and strict. Thus on the first pages of the first chapter, which discusses the textual basis for the study of Biblical Hebrew, one finds short, clear definitions, bulleted enumerations, and an explicit account of the choices made. Reading their book, however, I got the feeling that sometimes the rigour is abandoned and sensitivity and intuition come to the fore.

This happens, for example, in the presentation of parts of speech. Perhaps it is not by chance that the rigour that gave structure to the first two chapters is abandoned in the discussion of "The Andersen-Forbes Part-of-Speech System" (section 3.2). The discussion of the POS labels starts in section 3.2.1 with main class A, Particles, subdivided into Miscellany (section 3.2.1.1), Prepositions (section 3.2.1.2) and Conjunctions (section 3.2.1.3). Section 3.2.2 discusses the middle group, Adverbials and Pronouns and its subdivisions in a similar manner (3.2.2.1 The Modals; 3.2.2.2 Adverbials; 3.2.2.3 Negatives; 3.2.2.4 Interrogatives), but from section 3.2.3 onwards, the structure of the chapter in relation to their hierarchical organisation of Parts of Speech (cf. p. 42) becomes blurred.

Moreover, some POS labels raise questions: Why is the infinitive construct categorised under the main division of verbal nouns, but the infinitive absolute under verbals (pp. 25, 36)? Why are 'transitivity' and 'intransitivity' treated as semantic categories (p. 36) rather than as formal, syntactic ones (i.e. the number of elements that can be governed by the verb), especially since the authors admit that "[b]asing part-of-speech classification on meaning is unreliable" (p. 21; cf. above, on the role of syntax).

Concluding Remarks

Taking the authors' own anti-Chomskyan points of departure (cf. above) as the yardstick for their achievements, I have the impression that they authors rely more on theory, competence, and deep structure than they claim to do. Their visualisation in the forms of trees implies some type of linguistic theory and a focus on the deep structure of linguistic utterances. The role they assign to semantics and world knowledge diminishes the role of formal analysis and depends

¹⁸ Bosman and Sikkell 2006a, p. 132.

¹⁹ Cf. Dyk 2005.

much on competence, in this case the competence of the researcher. Their self-designation as eclectic is well taken. They succeeded in combining various modern linguistic approaches, such as Lexical Functional Grammar, Role and Reference Grammar, Phrase Structure Grammar, Generative Grammar and Corpus Linguistics.

Comparison with another database, in this case that of the ETCBC, shows that in the creation of linguistic databases, one cannot just enter 'the data', but has to make all kinds of decisions. It is not my intention to claim one database is better than the other or to advocate our own ETCBC database, rather it is just to show how theoretical linguistic decisions and the construction of a database are interrelated.

What the book under review demonstrates about Andersen and Forbes' database is that it is a powerful instrument and an incentive for innovative research into the Biblical Hebrew language. The authors not only provide descriptions of phrase and clause structure that are groundbreaking and address issues that have been completely ignored by centuries of Hebrew scholarship: they also present insights about the linguistic nature of Biblical Hebrew and the way in which its syntax can contribute to general linguistic discussions such as the distinction between configurational and nonconfigurational languages and the applicability of various modern linguistic approaches.

The authors are extremely modest in describing their achievements. In several ways they express their concern that "there is much in the book that is unfinished and provisional" (p. xii). They consider their book as "an initial foray, trying out the corpus linguistics way of doing research on the grammar of Biblical Hebrew" (p. xi). But such a modesty, though appreciated, is not needed. The book is an innovative, groundbreaking contribution both to Biblical Hebrew studies and to general linguistics.

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BOOK REVIEWS

W. Aylward (ed.), 2013, *Excavations at Zeugma Conducted by Oxford Archaeology*, Volumes I to III, Los Altos, California: The Packard Humanities Institute. Pp. i-xii + 1-279, 169 plates, fold-out plates (Vol. I); Pp. 1-258, 109 plates (Vol. II); Pp. 449 (Vol. III). ISBN 978-1-938325-29-8 (Cloth).

These three volumes are a treasure-house of information about the life of a Graeco-Roman site on the Euphrates, in a liminal position between Parthia and the Roman Empire, with a secure *terminus ante quem* of the Sasanian sack of AD 252/253. It is the extraordinary publication and final report of only one year's salvage excavations and conservation in 2000, carried out by Oxford Archaeology (OA) and the Centro di Conservazione Archeologica di Roma (CCA), funded by the Packard Humanities Institute. David Packard himself provides the foreword, in which he explains the complicated issues concerning excavation of Zeugma and those surrounding the establishment of a museum at Gaziantep. Aylward, in his preface, brings to life the race against the rising flood waters of the Birecik dam, working in extreme temperatures. He also documents his attempts at collaborative publication, which did not come to fruition. As a result, only the OA and CCA excavation of trenches 1, 2, 4, 5.7.9. 10, 11, 12, 13, 15, 18 and 19 are here published, but since that fills three hefty volumes, perhaps it is just as well.

Chapter I, by Aylward, provides a history of the previous excavations at Zeugma and summarises the method and results of the rescue excavation work in 2000. He deals with documentation, quantification of bulk finds (ceramic, glass, iron and animal bone), and site chronology, before embarking on some historical conclusions concerning the city plan, the 'standard plan' of the 13 houses partly excavated, the water supply, the nature and location of the missing bridge, Zeugma's relationship with Apamea on the opposite bank, the billeting of the *legio IIII Scythica* in Zeugma, the economy (trade, occupations and diet), religion, indigenous culture and finally the Sasanian sack. These conclusions are all based on the specialist studies of the architecture or artefacts dealt with in the following chapters, so, apart from whetting the appetite for what is to come, this reviewer found it refreshing, at the end of reading the three volumes, to return to the clear and summative conclusions of this so-called introductory chapter. One of the many new clarifications about Zeugma was that it did not have a major role in east-west communication overland, but rather in a regional trade network based on river traffic north-south.

Chapter 2 is a fascinating account by R. Nardi and K. Schneider of site conservation during the rescue excavations. Zone A, previously excavated, was already inundated, so work concentrated on the new (2000) excavation of Zone B. Here too the water was rising at an average rate of 20cm a day; the reservoir was filling at a rate of 15 per cent between July and September. Four thousand finds and 160 square metres of mosaic were removed, conserved and documented. For the excavated areas the aim was to consolidate any structures and protect any mosaic floors or painted walls that could not be removed. The latter was achieved by applying a removable lime-wash undercoat and a 5cm-thick coating of hydraulic mortar, also removable. Excavated areas were all re-buried, first with soft material in direct contact with the structures, then with heavier applications of gravel and stones. A total area of 8700 square metres was re-buried. Additionally, in a later attempt to ameliorate the dangerous disturbance of wave action in the fluctuation zone, bags of gravel mixed with cement, backed by deposits of stone, were placed along the shoreline. This chapter is illustrated by vivid photographs and clear line-drawings describing every process involved in this enormous, integrated conservation project, which must serve as a global model for those who can afford it.

J. Tobin's chapter on the houses presents the architecture and stratigraphy of 12 excavated areas, in which most remains were domestic in nature, with the possible exception of a portico and a public, but small, latrine. No complete house was excavated but Tobin is able to make some general observations, including the not-surprising one that most were courtyard houses, with mosaic floors and a colonnade in the courtyard. She defines first the major periods, from Seleucid to Early Islamic, then applies those to each trench,

where appropriate, with conclusions at the end of each. It is a rigorous and disciplined approach and Tobin is to be congratulated on its clarity, especially as she was not present herself but has had to rely on field records. Her final discussion summarises the developments and differences of the chronological periods, tying them, where possible, to historic events such as the arrival of the *legio IIII Scythica* and the subsequent flurry of building activity, or the optimism caused by the Severan conquest in the East, engendering more luxurious amenities.

Trench 15 was omitted from Tobin's analysis but is given special attention in Chapter 4, by Aylward, as the traces of a monumental public building were found there. A long outer foundation wall of 36.40 m, an inner foundation wall of 26.20 m and extensive paving at the south could suggest a temple or cult place. Aylward is cautious about this but it was here that the *dexiosis* stele of Antioch I of Commagene and Helios was found, deposited in fill associated with the modification of the building after his death, when presumably any ruler cult worship ceased. The modification is possibly dated by Tiberian ceramics but the building's function at this period is still unknown; re-orientation is almost certain. A period of stone robbing was then succeeded by the construction of a 'sizable' building re-using limestone spolia. This interesting chapter is expanded and illuminated by later chapters in Volume 1 on the basalt stele and its palimpsest inscriptions.

The next three chapters contribute both to Aylward's account of Trench 15 and to Tobin's account of the houses. In Chapter 5, Rous and Aylward present a catalogue of the architectural elements, mainly limestone, found in the monumental building but also in the houses, especially from the collapsed courtyard of the House of the Helmets. The catalogue features column bases, column shafts, both fluted and unfluted, and a variety of capitals (Corinthian and Tuscan), as well as fragments of a Doric cornice.

Dunbabin's chapter on the mosaics presents 27 mosaics from the 2000 excavations. She sounds almost apologetic in stating that only two of these are figured and that, in general, the other mosaics were simpler and "from the lower end of the mosaic workers' production'. According to her, even the figured works are not on a par with the quality of the mosaics in the House of Poseidon or the House of the Synaristosai, excavated by the University of Nantes. She calls the pattern repertory on the 11 geometric floors "limited"; there is no 3D effect or complex perspective, which she sensibly explains as due to economic factors, i.e. they were expensive to achieve. The catalogue is arranged according to house, which enhances Tobin's work in Chapter 3. The two figured floors are very different. One, in the House of the Bull, which contained the largest number of mosaics, featured the mask of Silenus, a Maenad's head and birds, in rectangular panels. Dunbabin finds parallels in Zeugma itself and in Antioch. The second, in the House of the Fountain, shows Nereids riding on fantastic sea monsters in the central panel, surrounded by complex patterning. Both are described in vivid and accurate detail, helped by the excellent illustrations at the back of the book. Dunbabin has an interesting discussion of the iconography of the Nereids, allowing for the possibility of the conflation of the Nereid theme with the myth of Europa and the Bull (one of the Nereids is draped over a sea-bull).¹ This is a rich contribution to the study of mosaics, however humble these examples might be considered to be.

Bergmann's chapter on the Wall Painting is equally helpful for interpreting the houses. None of the stucco was lifted in 2000; all was conserved by the method described in Chapter 2. Most of the frescoes were imitations of marble, not particularly realistic but offering opportunity for fantastic colour effects and combinations. Figures were rare and associated with a few examples of illusionist architecture, where figures stood or strode between columns. Quite common was a simple decoration of rectangular panels, framed in red or green, on a white wall, the panels containing red and green garlands and birds. Again the catalogue is organised by houses, and the description and discussion are beyond reproach. The illustrations here are a little disappointing, probably because of the difficulty of photographing fresco *in situ*.

The next chapter seems to lead on naturally from this, in dealing with the graffiti on the walls, most of which occurred on the wall of Room 9G in the House of the Hoards. This is a very entertaining chapter

¹ The 'Abduction of Europa' is the title given to this mosaic in the Gaziantep Museum's publication Önal and Cimok 2009, p. 103).

by Benefiel and Coleman, who obviously enjoyed interpreting the graffiti. Boats were most popular, naturally along the Euphrates, and gladiators (some with unorthodox equipment) were next, prompting the suggestion of the provision of shows for the military, although no amphitheatre has been located. The text is lightened by loads of illustrated parallels.

The important stone inscriptions come under scrutiny in Chapter 9, with most of the focus being on the two versions, earlier (IN₁) and later (IN₂), of the *dexiosis* stele inscription. The stele was published in 2003, but here Crowther presents the restored texts in full, with translations. The restoration of the texts, based on the formula known for Commagenian royal inscriptions found at Nemrud Dağı and Samosata, is a masterpiece of scholarship. Importantly, the fact that the later inscription IN₂, is almost certainly contemporary with the carving of the scene, generates a re-evaluation of the development of the ruler cult. The *dexiosis* scene was developed by Antiochus I towards the end of his reign, not at the beginning.

The iconography of the scene is discussed by C.B. Rose in Chapter 10. Rose is also able to restore the lost part of the head-dresses by analogy with other scenes from Samosata and Sofraz Köy. He points out that it is important evidence for a *temenos* for Antiochus I of Commagene at Zeugma, perhaps the monumental building where it was found discarded. The Achaemenid dress of the king balances the Greek heroic nudity of Helios; the exaggerated right hands performing the *dexiosis* underline the king's eagerness to synthesise Greek and Persian deities, such as Artagnes Herakles Ares, named on the inscription on the other side.

Chapter 11 deals with the geophysics involved in the excavation. Methods used were GPR, magnetometry and electrical resistivity, the results of all of which contribute information not only about the trenches excavated but also the unexcavated spaces between. For example, the street alignments on the terraced promontory overlooking the river, thought to be the Hellenistic core of Zeugma, match those of Hellenistic Apamea across the river. Often such scientific material is published on its own in a specialised journal, so here it is useful to have it directly linked to the excavations.

The final chapter in this volume describes a topographical survey along the shoreline of the reservoir in 2001, by Aylward. This could be considered superfluous, as most observations have already been noted in previous chapters, but it does provide an epilogue to the focus of this volume on the excavation itself and the conservation efforts.

The remaining two volumes are packed with important artefactual surveys, typologies and catalogues, each organised into the major periods defined by Tobin in Volume I. First in Volume II, quite rightly, is Philip Kenrick's analysis of the "pottery other than transport amphorae", a distinction which must have been quite difficult to make. The analysis covers selected contexts, only a small part of the whole corpus excavated in 2000 (and an even smaller part of the overall excavations). Nevertheless, those contexts cover the major periods and in many cases are the principal or only source for dating the levels. Kenrick's Groups A–G correspond to those periods. After a detailed description of the fabrics involved, each group is introduced by a discussion of its character and date, followed by a quantified table before the catalogue. This reviewer was delighted to find that group A, representing the Hellenistic period of the second half of the second century into first century BC, a period poorly represented in other artefactual corpora from the 2000 excavations, comprised a significant number of vessels, and, further, that the "local Hellenistic fine ware" continued to be made in the same forms throughout the first century AD and even into the second, in spite of the import of different forms of Sigillata from the West (Eastern, Italian), which could have influenced taste but didn't.

One of Kenrick's aims was to use the pottery to trace the "cultural leanings of the inhabitants at Zeugma and their trade relations at different times." One very interesting fact emerged from the quantification of table vessels. In the largest Group D, dating to the Sasanian sack of 253 (but presumably also covering the prosperous period preceding that), the use of tableware diminished to less than 7 per cent of the pottery corpus, a dearth also noted elsewhere. At Zeugma, economic decline is discounted as a cause. Having read on to Grossmann's chapter on glass, one wonders whether the plethora of glass at this same period and the possible establishment of local workshops might suggest the substitution of glass tableware.

As for trade relations, Kenrick clearly establishes that most imports were from the west. There is no evidence of trade from the east in pottery and very little from down river. In other chapters, Dura Europus is

often referred to for comparanda, so it is surprising that 'Parthian' green-glazed pottery is so sparsely represented at Zeugma, especially when it was well represented at Jebel Khalid, not far south along the Euphrates.²

This chapter, covering more than 1000 years of habitation, provides an overview of changing tastes at Zeugma and a benchmark for studies of pottery of the Middle Euphrates. It is beautifully illustrated with both colour pictures and drawings.

It is pleasingly logical for this chapter to be followed by Chris Doherty's petrographic analysis of table and kitchen wares (Chapter 2 in Volume II). A total of 28 samples was submitted, covering the 'local Hellenistic fine ware', the glazed wares, buff ware fabrics, cooking and storage ware fabrics. Included was a sample of locally extracted building sand, to provide a model of local Euphrates material. The analysis was by thin section, after initial examination by low-magnification stereo binocular microscopy. Extensive use was made, for predictive purposes, of geological maps and surveys. The results are presented as responses to particular questions but do more than that in offering characterisations of the different fabrics. This chapter will be immensely useful for pottery studies of the Euphrates area.

Paul Reynolds deals with the Transport Amphoras in Chapter 3. This chapter benefits greatly from Reynolds' experience of studying the Beirut amphoras, which he often draws upon as a useful comparison with Zeugma. The chapter is divided into three sections: evaluation, typology and catalogue. Possibly the typology could have come first as the evaluation refers to forms which are not defined until the typology is reached. However, that is a small quibble compared with the value of this chapter in presenting the differences in imports between periods, thus defining the character of a period quite vividly. Using the same groups and contexts as Kenrick, Reynolds finds imported amphoras rare in the Tiberian-Augustan period and also in the Flavian-Trajanic. At this time, it seems that Zeugma was relatively isolated from long-distance supply networks. In contrast the third century preceding the Sasanian sack had a rich assemblage. Not only did a new form of local amphora appear but imports came from a wide area — e.g. from Campania (wine), Spain (oil), Portugal (fish sauce) and Kos. Reynolds remarks on the paucity of imports from (i.e. contact with?) the Levant. This contrasts again with the seventh-century situation when Zeugma was swamped with imports of Syrian painted amphorae (contents unknown) and also received long-distance imports from Sinope (probably through a coastal port) and Palestine, so was open to trade routes to/from the south and north, as well as the west. As well as providing this valuable and intensive survey and catalogue (enriched with comparisons with coastal Beirut), Reynolds comes up with some intuitive insights, such as the connection of Campanian wine drinking with the military (and hence the *Legio IIII Scythica* in the third century at Zeugma) and the distribution of Syrian amphorae in the seventh century being linked with the provisioning of the Byzantine *limes*.

Again appropriately, the following chapter deals with the petrographic analysis of the amphora fabrics, of both local and long-distance imports, an analysis that will be of great value in comparative studies.

The remainder of Volume II deals with lamps, figurines, bullae and glass. In Chapter 4, M. Hawari catalogues 213 lamps, divided into nine types, ranging from a very few (four) wheel-made Hellenistic fragments, to Islamic lamps of the ninth to eleventh centuries AD. Hawari rather strangely dates the earliest wheelmade lamps to the second half of the second century BC, on the basis of Kenrick's dating of the Hellenistic pottery to that period, although he finds parallels in Antioch dated to the third century BC. His Type 4, "conveniently" named after Dura-Europus because of the resemblance to many excavated there, is the most numerous from the third century AD, prior to the Sasanian sack. He suggests they were imports from Dura-Europus, whereas Type 6 (ovoid lamp with linear patterns), which also has comparanda at Dura-Europus, was a 'limited local production'. If so, it may have been exported south, to Tel Munbaqa to the south-east³ and to Jebel Khalid, where the type was associated with the Roman camp there in the fourth century AD.⁴ At Zeugma it is dated by the sack to the third century AD but the type may well have had a longer life elsewhere. The largest number of lamps of any one type belongs to the locally-manufactured

² Jackson 2011.

³ Mackensen 1986, p. 41, fig. 140.

⁴ Jackson (forthcoming), catalogue no. 387.

Type 8, Syro-Palestinian lamps of the seventh to eighth centuries AD, which fact nicely coincides with the opening-up to Syria evidenced by the import of painted Syrian amphoras. This whole chapter is a welcome addition to lamp studies of the region.

Chapter 5, by J. Gingras and W. Aylward, presents regrettably few figurine fragments (24, five of which were unidentifiable) from the 2000 excavations, a dearth which they attempt to explain by pointing out that the contexts were mainly domestic, not sanctuaries. Over 50 per cent of the figurines were anthropomorphic, and five of those were disembodied female heads, which the authors are a little too ready to ascribe to Aphrodite. Two mask fragments and a Pappasilenos figure may attest to the existence of an unexcavated theatre. The absence of any horse figurine, in contrast with Parthian Dura-Europus, is ascribed to the Roman presence but in such a small corpus, the absence is hardly conclusive. It is to be hoped that publication of the figurines from the rest of the Zeugma excavations will provide greater scope.

In the next chapter, Sharon Herbert publishes 21 clay sealings found in the 2000 excavations. Another 140,000 had been found in the Gaziantep excavation of Trench 3, probably an archive building, but are not yet published. In the OA excavations six of the sealings were in Trench 9, but others were scattered and mainly surface finds. Nevertheless they represent varied forms, function and iconography of some interest. There are no Hellenistic 'envelope' bullae. Herbert considers them all to be Roman, particularly the eight 'Untersiegelung' type, used often to document payment of export or road tax. All six in Trench 9 were of this type, and four of those had iconography associated with Caesarea in Cappadocia, enabling Herbert to suggest that the house or shop in Trench 9 belonged to a merchant who traded with Cappadocia. All the sealings are well illustrated with photographs and drawings, which include profiles.

The final chapter in Volume II is devoted to the copious glass fragments found. R. A. Grossmann documents 10,500 fragments, of which 54 per cent was window glass, 45.5 per cent vessel glass and the remaining 5 per cent glass objects. The catalogue contains 120 items, ranging from the Seleucid to the Islamic periods and covering cast vessels, mould-blown, and blown vessels with cut, applied, or pinched decoration. Each item is independently illustrated in the text, which is very user-friendly. Tableware vastly outnumbers other vessels (i.e. bottles, unguentaria, lamps and large storage or transport jars). Grossmann finds the greatest quantity and diversity in the Middle Imperial period (161–253), corresponding to the most prosperous period at Zeugma, when pottery was perhaps partly replaced by glass. The window glass also came from this period and was found in the two most prosperous houses, the House of the Bull and House of the Helmets. Glass objects were beads, bracelets, ring bezels and a gaming piece.

Volume III is devoted to the analysis of coins, metals, military equipment, discussion of Zeugma's military involvement, textile manufacture and finally, several chapters dealing with the environment, fauna and flora. Kevin Butcher's chapter on the coins is masterly, as one would expect. Not only does it present a beautifully illustrated catalogue of the 288 'single' coins found but it also throws light on the concept of 'hoards', where people deliberately chose to gather together certain coins for a purpose that is not always clear or rational. Of the single coins, most came, understandably, from the destruction levels in the third century AD, representing Antiochene, Mesopotamian, Pontic and Peloponnesian sources, a result which Butcher compares with Dura-Europus. Of the four hoards, the first was most interesting, consisting of 462 coins from Antiochus IV to Gordian III and representing a wide variety of mints from Gaul to Mesopotamia. Butcher calls it "a junk box of coins", as many of them could not have been used as legal tender at Zeugma. The other, smaller hoards were more homogeneous. All are meticulously described. Before the catalogue at the end of the chapter, Butcher usefully summarises the finds per individual trench.

In Chapter 2 on the Copper Alloy objects, Elias Khamis first discusses preservation (good, thanks to the dry climate), dating (as usual, most from the third century destruction levels) and manufacture (hammering, casting and some repoussé). The catalogue is divided according to function, i.e. vessels, lighting, military equipment, jewellery, cosmetic implements, casket and furniture fittings, locks and padlock plates, nails and tacks, chains, rings and statuettes (two of Aphrodite). This list in itself reflects the rich variety of objects recovered. Again, the illustrations, both photographs and drawings in the text, are of very high quality. They are nearly all 1: 1, with the exception of the fascinating steelyard fragments, upon which Khamis expends some discussion as to the way it worked. What is missing in this chapter is the significance

of the find contexts (contexts are cited but not discussed) but perhaps this was deliberate in that later chapters single out the military items for further discussion. Nevertheless this chapter is a treasure house for specialists in bronze objects (too often neglected in field reports) and provides much material for household analysis.

The same applies to the report on the iron finds, by Ian Scott (Chapter 3) but Scott does what is missing in the previous chapter and provides quantified tables listing the iron objects found in trenches, houses and rooms, plus a house-by-house description of levels and dates where the finds occurred, with a view to throwing light on room function, such as rooms lacking any personal items, and rooms with a plethora of tools or of household items. Of 5858 objects, 3833 (65.4 per cent) were nails. Other items were categorised by function: arms and weapons, tools, transport, personal, household, fittings, security items. As for the bronze objects, all are well illustrated with clear drawings. Finally the nails are classified and quantified by shape, an exercise that will be a useful report model for other sites.

Scott also, in a very short Chapter 4, lists the three gold objects found. Of these, the most interesting is a gold ring engraved with a Capricorn and crescent. The Capricorn was the badge of several legions, including *legio IIII Scythica*.

There follows a chapter on the worked bone objects by Bethan Charles, who identifies mainly hair pins, needle, distaff, spatulas, furniture fitment, knife handles, dice and torsos only of jointed dolls, whose limbs may have been made of another material. Again the coverage is complete and the illustrations clear. One decorated rod was identified as ivory.

Since a few of the bone items are probably associated with textile manufacture, it seems natural to progress, in the next chapter (6), by Holly Parton, to weaving equipment, although this chapter also incorporates milling equipment, i.e. stone tools, mortars, querns and vessels, so covers the working life of the inhabitants of the domestic contexts where they were found. Three types of quern were found, only one non-rotary. Most (19) were the hand-held rotary type, i.e. for domestic use. There were also seven examples of the larger *catillus*, famous from its survival in bakeries at Pompeii and Ostia, but at Zeugma smaller. Parton concludes that these represent only household use, not commercial. Nearly all were found in the third century destruction levels. The relative dearth of loomweights leads Parton to suggest that the warp-weighted loom was being replaced by the vertical beam loom. The variety of size and weight of the spindle whorls must reflect a variety of yarns, some very light, used in textile manufacture. This chapter is very thorough and demonstrates great technical expertise.

It is a pleasure to find a chapter on Textiles following this, documenting the unusual preservation of some textile fragments, from the carbonized layers associated with the third century AD conflagrations. Franca Cole hastens to say that the sample is not representative of textiles used, as it does not include wool. The preserved textile fragments were of bast fibre, i.e. probably linen, mostly coarse and probably local, with a few finer imports. Their style of weave supports Parton's suggestion, in the previous chapter, of a shift to the vertical beam loom. Cordage of plant fibre and shoe soles of woven vegetable fibre, the latter preserving technology used in Egypt and Neolithic Spain, were also found.

The next three chapters seem to interrupt the flow by returning to the issue of the evidence for military presence at Zeugma. In Chapter 8, Ian Scott extracts the objects with military associations from the metal catalogues, with the aim of focussing on the military context. While it is useful to have attention drawn to this specific focus, one wonders whether it was necessary to catalogue the same items again. However, Scott does make it clearer that the distribution of such finds was concentrated in certain structures, most especially the House of the Helmets. The designation of pila use to legionaries, the specific spear typology and the discussion of scale armour fill out the catalogue information. He does not limit his chosen objects to arms and armour (the chapter's title) but includes the Capricorn ring and the Aucissa brooch (with western origins). His discussion of the significance of this military equipment in the town houses is sensibly inconclusive: it could reflect soldiers billeted, but also just fighting in the town, or combat losses. The best-preserved helmet is a parade helmet not a combat one.

Hugh Elton's chapter on Zeugma's military history in the light of the rescue excavations, lists the historical evidence for Zeugma having a military function as a Roman legionary base, from the possible presence of the *legio X Fretensis* in the first century AD, to the arrival of the *legio IIII Scythica* in the later first century AD,

the sack itself and the post-Sasanian military history. Elton ties these events to the archaeological finds where possible but this again entails some repetition of lists of the relevant finds (and some contradictions?).

New evidence is presented in the next chapter, hinted at in Elton's chapter by the mention of the names of ten legions on tile fragments at Zeugma. These were nearly all found on the At Meydani plateau, surveyed and partly excavated by the Swiss in 2001–2003, in a search for the permanent legionary fortress of Zeugma. M. Hartmann and M.A. Spiedel's Chapter 10 (Military Installations at Zeugma) gives an overview of the investigations, which includes yet another summary of the historical and geographical context, this one accompanied by a useful map of the location of Roman legions along the northern Euphrates frontier. Massive stone walls excavated must have belonged to a fortification, with occupation levels from the first century to the fourth AD, with its military function proved by significant amounts of military equipment (weapons, armour scales, scabbards, mantraps, mail shirts, helmets and part of a catapult), beside which the OA finds in domestic contexts pale into insignificance.

The language on the tiles (and on some gravestones) is Latin, not the local Greek. The tiles and other inscriptions attest to the repeated presence of Roman soldiers from the first century to the third AD. The *legio IIII Scythica*, judging by the number of stamped tiles, was responsible for most of the construction work at At Meydani but Hartmann and Spiedel argue that the absence of a soldiers' graveyard suggests that their own permanent fortification was elsewhere and that this site was for the many other legions from other places stationed at Zeugma at various times.

The last four chapters belong together thematically since they tackle the ancient environment, the faunal remains, the plant remains and the source of charcoal. Chapter 11 (Environmental Studies, David Meiggs) serves as an introduction in reconstructing the ancient environment, using evidence from the present and past environment, including the archaeological evidence of charcoal and pollen cores. Not surprisingly, Meiggs attributes most changes to human influence, notably in the reduction of forests to the north of Zeugma. By the end of the first millennium BC, the climate was drying and precipitation lessening. This chapter is important comparative material for other sites in the area. The following chapters illustrate "the complex relationships between cultural choice and environmental constraints."

Bethan Charles deals with the faunal remains in Chapter 12. As at other sites, the identified bone fragments indicate cattle and ovicaprids were mature when butchered, their other uses as draught animals, providers of wool, milk and cheese being prioritised. Pigs were slaughtered young. Since no butchery sites or large bone dumps were found, Charles suggests that refuse was taken outside the occupation area. The diet scene is further augmented by Challinor and de Moulins' chapter on the plant remains detected in comprehensive soil samples taken from a variety of contexts, but in practice most productive in the destruction layers. The list is consistent with Roman diet at other sites, comprising two types of wheat, barley, lentils, a profusion of *olea Europa*, almonds, grapes, pomegranate, walnuts and pistachios, all probably grown locally. The walnuts provide exciting evidence that the Sasanian sack took place in the autumn. As in the previous chapter, the authors find that the paucity of remains suggests an "efficient policy of rubbish removal." In the excavated areas (this chapter usefully records finds per trench), there was no evidence either of ritual offerings or "semi-agricultural activities" (such as dehiscing cereals). The final chapter on charcoal, by Rowena Gale corroborates the local sources suggested by Challinor and de Moulins. This chapter completes the picture of life at Zeugma, not only with a fascinating list of types of tree but with reconstructions of where the trees may have been planted, e.g. fruit gardens on the banks of the Euphrates, olive groves further uphill, shrubs and shade trees planted in garden or public areas in the city. The fruit gardens and olive groves also provided some of the fuel for the estimated 50,000 inhabitants of Zeugma.

All four of these last chapters are models: meticulously researched, full of useful graphs and tables, and productive of important and wide-ranging information about life at Zeugma.

This goes for the whole publication. It may have taken a long time to gather and edit the various data, but the result is stunning and so much more accessible than specialised volumes or articles published at different times. Illustrations are lavish and largely in the text; those to be turned to at the end of Volume I are referred to by several chapters in that volume. In three volumes we have the whole picture of Zeugma afforded by the 2000 excavations: the houses of the residential district, with their wall decoration and mosaic floors, the one monumental building with its inscriptions, daily life as expressed in the pottery,

glass, bullae, lamps, graffiti, textiles, milling equipment, metals and other small finds, trade contacts as expressed in the transport amphorae and coins, political and cultural allegiances, diet and the environment, the role of the military. With thoughtful editing, one topic flows into and is expanded by the next. As well as all this, there is the model of conservation offered and the consequent hope for the future. Finally, an added bonus is that the electronic version of the books affords everyone access to this treasure-house of information.

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Trevor Bryce, 2012, *The World of the Neo-Hittite Kingdoms: A Political and Military History*. Oxford: Oxford University Press. Pp. xiv + 356, illus & maps. ISBN 978-0-19-921872-1 (Cloth & softcover).

The principalities that flourished between 1200 and 700 BC in Syria and southern Turkey present an enormous challenge to scholarship. Documentation is too sparse, shallow, and incoherent to offer more than the disarticulated bones of a native historical narrative, let alone a skeleton. Material evidence, much of it stemming from excavations undertaken at the dawn of Near Eastern archaeology, is most conspicuous in the remarkable monumental sculpture which adorned gateways and public buildings, while more mundane artefacts from stratigraphically controlled excavations are only gradually filling out the picture for non-elites.

It is a bold venture to try to write a history of the world centred on these principalities and we may be grateful that Trevor Bryce has made the attempt. In the wake of his excellent Oxford University Press surveys, *The Kingdom of the Hittites* and *Life and Society in the Hittite World*, he, if anyone, is well positioned to instil clarity on a confusing and ill-documented subject. Alas, it may not be possible.

Deciding what to see as "Neo-Hittite" in this foggy landscape of broken stelae, laconic inscriptions, ill-defined polyglot polities, ambiguous chronology and archaeological malpractice is a key issue, and one to which Bryce gives considerable attention. While the Luwian language and traditions spawned in Bronze Age Anatolia and the Hittite Empire permeate the region, their depth and character differ from place to place and change over time. Some of the Iron Age principalities of the area in question were clearly more "Hittite" than others. Luwian proper names and Hittite inspired art also appear in states that chose Aramaean as their medium of royal expression. Since we have no documentation of the sort found at Kanesh, Nuzi or Alalakh in the Bronze Age on which to perform onomastic analysis and therefore cannot

be at all precise about who was speaking what language, many historical treatments have chosen to deal with “Syro-Hittite” civilisation for the whole spectrum. Winfried Orthmann’s *Untersuchungen zur Späthethitischen Kunst*, for example, does not disdain Zincirli, Maraş, and Sakçagözü as sources of late Hittite sculpture despite the paucity of evidence for Luwian at those sites.¹

While acutely sensitive to the uncertainties, Bryce has chosen to define a core group of Neo-Hittite kingdoms: “...the states we have called Neo-Hittite are so named primarily because their rulers used the Luwian hieroglyphic script on stelae, wall and gate orthostats, and building blocs (that is to say, on public monuments), for dedicatory and commemorative inscriptions.” (p. 203). While he does not attempt to untangle the history of these from these states from others of the time, the emphasis on inscriptions inevitably downplays other forms of evidence that might broaden the historical perspective.

Bryce engages the subject of the Neo-Hittite world from several angles, generally favouring comprehensiveness at the expense of redundancy. The first four chapters of this substantial book form a kind of prelude and general overview by focusing on large themes: the end of the Hittite Empire; the changes in the political and ethnic makeup of Anatolia in the aftermath; the constituent kingdoms of the core of area of the study; and the question of how biblical references relate to the historical Hittites as they are now understood. Each of these is an interesting essay which could well stand alone.

The second section of the book consists of five chapters in which kingdoms of the Iron Age are treated individually, in geographical and cultural groupings. Detailed dynastic histories of Neo-Hittite states, as the author defines them, are presented in three chapters: one for those in the Euphrates region (Carchemish, Malatya, and Kummuh); one for more westerly kingdoms in Syria (Gurgum, Patin, and Hamath); and one for the western kingdoms in Anatolia (the subdivisions of Tabal, Adanawa, and Hilakku). Bryce cautions his reader that these chapters are essentially for reference, not narrative, and indeed one does keep returning to them. The Aramaean states are given similar treatment in chapter of their own, and additional background is presented in the section’s final chapter with brief orientations on everybody else in the Near East who might be of relevance: Assyria, Babylonia, Elam, Israel, Urartu, and the Phoenicians.

In a discussion including so much detail, it is not surprising to find errors. On p. 170, for example, in discussing Zincirli, Bryce fails to mention the pioneering 19th-century German excavations of Humann, von Luschan, Koldewey and Jacoby, which are summarised in R. B. Wartke’s nicely illustrated *Sam'al: Ein aramäischer Stadtstaat des 10. Bis 8. Jhs. v. Chr. und die Geschichte seiner Erforschung*.² Instead there is a claim that John Garstang excavated the site, which surely refers to nearby Sakçagözü, discussed later on the same page. This kind of error is unnerving in a book that puts such stress on marshalling the facts for analysis.

The third and final part of the book consists of three substantial chapters of interpretive history that puts all of this into chronological narrative. The scaffolding is inevitably provided by Assyrian annals. For the 12th and 11th centuries, which are crucial for understanding how the Neo-Hittite principalities were formed, Tiglath-Pileser I provides the only such source. Then darkness returns until Assurnasirpal II brings Assyrian armies west again two and a half centuries later, from which point documentation is a good deal more precise until the kingdoms were absorbed and assimilated into the Assyrian empire at the end of the eighth century. In his discussion, Bryce follows the Assyrians closely, noting their activities in other areas such as Babylonia and Urartu to round out the picture. This section of the book is quite readable, but maps of individual campaigns might have made it still easier to follow.

Despite the overwhelming richness of this book, its subtitle, “A Political and Military History,” is something of an exaggeration. The documentary sources do not reveal anything of the political structure of these Neo-Hittite kingdoms below the level of their ruling dynasties. Nor do we have any idea about their military institutions, or actions, beyond what the Assyrians tell us. What we have, quite literally, are kings and battles — and only the barest accounts of these. By the ground rules that Bryce has set for himself — reliance on texts alone — this is perhaps is all that can be done.

¹ Orthmann 1971.

² Wartke 2005.

Archaeological evidence, however, is by no means irrelevant to some of the larger questions that Bryce would address, such as the origin of the Neo-Hittite principalities. The magnificent temple excavated on the Aleppo citadel, and indeed Aleppo itself, should be part of this discussion. New finds of no small importance are currently emerging from excavations at places like Tell Tayinat and Zincirli. Bryce embraces them only insofar as they bear on inscriptions, but surely they have much more to say about the conditions under which the politics operated and the wars were fought. This reviewer's understanding of the world of the Neo-Hittites has admittedly been prejudiced by three field seasons at the Syrian site of 'Ain Dara, which does not even appear in the index of the book under review, although it does appear in a map. It is hard to justify this exclusion, for although there are no long Luwian texts from 'Ain Dara, there are short ones. Even if these had not been found, the reliefs that adorned the temple at the summit of 'Ain Dara's citadel mound are indisputably Hittite and closely related to the sculptures of Carchemish. Particularly strong ties to the Hittite past are seen in 'Ain Dara's representations of mountain gods, a staple of Hittite imperial art but otherwise a rarity in the Iron Age. This site spans the Bronze and Iron Ages and was clearly a major population centre in the time that the Neo-Hittite states were forming. Late Helladic IIIc pottery, usually linked to the Sea Peoples, was found in its lower town, and if the newly hypothesised kingdom of Palestina had its capital at nearby Tell Tayinat and stretched to Aleppo, then 'Ain Dara was clearly part of it. Ninth century pottery also indicates this was an important centre when Assurnasirpal marched down the Afrin valley to Kinalua, although he did not see fit to mention it. Doesn't this say something important about structure of the kingdom of Patin/Ungi and the Neo-Hittite world generally?

Bryce is certainly aware of the necessity for including more information in the cultural sphere, particularly archaeology. In the final paragraph of his introduction he expresses the hope that his work may "provide a useful historical background" for broader treatments of the Neo-Hittite world. It can hardly fail to do that. One can only hope scholars of similar energy will embrace the challenge.

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Trevor Bryce, 2014, *Ancient Syria: A Three Thousand Year History*, Oxford: Oxford University Press. Pp. xix + 379. ISBN 978-0-19-964667-8 (Cloth).

In *Ancient Syria: A Three Thousand Year History*, Trevor Bryce, one of Australia's leading ancient historians and classicists — an Honorary Professor at the University of Queensland and Emeritus Professor of the University of New England — explores the enduring history of ancient Syria from the Bronze Age to the Roman era and beyond. Bryce states at the beginning of his book "The purpose ... is to tell a story, more precisely a series of stories, and sometimes stories within stories. All of them are about Syria, have Syria as their focus, or start from or end there" (p. 1). Above all, he is interested in the human actors who instigated, participated in, and became the victims of the events of these stories. His penetrating study is based primarily around the surviving written sources on ancient Syria.

In writing his historical narrative the author stresses he has confined his attention almost entirely to the political and military events of the periods in question (p. 4). One short statement at the beginning

of text encapsulates volumes: “Syria was strategically important” (p. 7). According to Bryce that’s why Syria’s history seems to be dominated by stories of outsiders fighting one another over it. The Hittites and Egyptians, Assyrians and Babylonians, Persians and Macedonians and even the Romans are all involved in the history of Syria. Bryce is emphatic in his view that Syria suffered at least as much as it benefited from its international intruders. In focusing primarily on the political and military events of the ages covered by this tale, and particularly on the big names that feature in the stories of these ages, Bryce has concentrated on but one aspect of Syria’s remarkable history, allowing for an in-depth understanding and deep historical perspective on these significant aspects.

Conveniently for the reader, *Ancient Syria* is arranged chronologically. It comprises five parts: the Bronze Ages; the Iron Age to the Macedonian Conquest; Syria Under Seleucid Rule; Syria Under Roman Rule and the Rise and Fall of Palmyra. The first section is the longest, covering a period spanning 1700 years. The second to fourth sections are approximately the same length. The last section is the shortest. The headings and sub-headings structure the text, making the complex history of Syria easy to navigate. Endnotes are used sparingly. At pivotal points throughout the study pertinent comments are inserted (often in parenthesis) that help guide the reader. The book also contains three handy appendices: Chronology of Major Events and Periods; King-Lists; and Literary Sources. A concise Bibliography (over 90 sources) lists the most relevant and recent scholarship. A detailed Index enables readers to look up and find topics easily. And the text is enhanced by a series of useful maps (1–12) and figures (1–27). As an ancient historian, Bryce is concerned with the analysis of events that happened a long time ago. The following summary provides a précis of some of the key historical developments.

In Part I *The Bronze Ages* (pp. 9–94), it is noted that the discoveries made by Italian archaeologists working at Tell Mardikh, ancient Ebla, in northwest Syria dramatically transformed our understanding of the history of this area. Paolo Matthiae and his team uncovered a multi-chambered complex, known as Palace G, belonging to the third millennium BC. But the most spectacular aspect of the find was a massive collection of thousands of clay tablets, inscribed with cuneiform script. The tablets, excavated between 1975 and 1976, provide us with early evidence for writing in Syria. Many of the tablets were written in a local Semitic language, referred to as Eblaite. Bryce points out that the Ebla tablets are the oldest significant evidence we have for any Semitic language in written form. The majority of the tablets are administrative documents. They indicate the existence of an enormous royal, highly centralised bureaucracy. The tablets also reveal a thriving textile industry associated with wool production and tell of the distribution of these products, both to local officials within the Ebla regions and to important foreigners.

From both written and archaeological sources, it is possible to build up a picture of Ebla as the most politically and commercially powerful kingdom of northern Syria in the Early Bronze Age (p. 15). The Kingdoms of Mari, Yamhad (Aleppo), and Qatna are also considered in the survey of the Bronze Ages covered in Part I. Syria’s external relations with Egypt and the Hittites are discussed in some detail. Other key groups considered include the Amorites, Hurrians, and Mitannians. Bryce records that the final days of Ugarit (Ras Shamra) provide a microcosm of the forces of upheaval and destruction that engulfed much of the Near Eastern world in the late 13th and early 12th centuries BC — ending an era of internationalism. For the Syrian coastal kingdom, the dangers came particularly from the sea. Ugarit is caught up in the havoc that brought the Late Bronze Age civilisations to an end in both the Aegean and Near Eastern worlds. Egyptian records associate these devastations with enigmatic groups called ‘peoples from the sea’, more commonly known as the Sea Peoples.

Part II *From the Iron Age to the Macedonian Conquest* (pp. 95–155), extends over five centuries, taking the reader from the 12th century BC through to the end of the 7th century BC, up to the fall of the Neo-Assyrian Empire. It encompasses the dawning of a new age, the so-called Iron Age, when the Neo-Hittite kingdoms were a marked feature of Syria’s political and cultural landscape, through the period of Assyrian domination of the region, followed by the domination in turn of the Babylonian and Persian Achaemenid empires, and the short-lived empire built by Alexander the Great.

The time span covers much of the period commonly dubbed the Iron Age by archaeologists and historians. As Bryce notes, in Syria and Palestine, the ‘era of iron’ saw profound changes in the region’s geopolitical configuration (p. 100). One of the most distinctive features of the new era was the appearance of

new population groups, most notably the Aramaeans, which were to have a profound effect on the history, culture, and ethnic composition of the states, cities, and peoples of Syria and Palestine. Prominent among the new states to emerge during the early Iron Age was a group referred to as the Neo-Hittite kingdoms. The earliest and most important of the Neo-Hittite states was Carchemish on the Euphrates (Carchemish, one of the most important capitals of the ancient Near East, was originally excavated by C. L. Woolley and T. E. Lawrence under the auspices of the British Museum, more recently a Turkish-Italian team has worked at the site). Originally tribal pastoral groups, but believed by this time to contain indigenous elements from the region of northern Syria, the Aramaeans spread widely through the Near Eastern world during the Iron Age. They spoke a West Semitic language called Aramaic. Aramaean and Hittite elements became closely blended in a number of Syrian states. Both the Canaanites and Phoenicians are examined before a consideration of the Assyrians.

Bryce notes that the Assyrians under Shalmaneser III conquered Til Barsib (modern Tell Ahmar — see below) on the east bank of the Euphrates, the stronghold of the Ahuni, king of Bit-Adini in 856 BC (p. 122). As the Assyrian Empire expired under its last king Ashur-uballit II (612–601), two years after the fall of Nineveh, the Neo-Babylonian Empire, founded by Nineveh's destroyer Nabopolassar, rose rapidly to take its place. For Syria and Palestine, the fall of Assyria and the rise of Babylonia simply meant an exchange of overlords (p. 141). No major power could claim supremacy in the Near Eastern world without undisputed control over the kingdoms and cities that lay between the Euphrates and the Mediterranean. Despite his extensive conquests and the assertion of his sovereignty throughout many of the regions where the Great Kings of Assyria had once held sway, the empire which Nebuchadnezzar built began to crumble soon after his death. In 539, in the reign of Nabonidus, it fell, weak and divided, to a new power emerging in the east, the kingdom of Persia. The ruler of this kingdom was a man called Cyrus II. We know him better as Cyrus the Great. Syria was soon to be a satrapy with a new overlord. Damascus was most likely the capital of the new Persian satrap. Strabo calls it "the most famous of the cities in that part of the world in the time of the Persian Empire" (p. 149). It became the headquarters of the Persian forces in Syria. Bryce recounts that in the summer of 333, Alexander descended through a pass in the Taurus mountains into Cilicia, on the south-eastern coast of Asia Minor. The invasion of Syria and the seizure of its coastal cities was an urgent priority for the Macedonian. Darius, king of Persia, was determined to stop him before he could penetrate Syrian territory. The forces of the two kings met, this time on Syria's northwestern frontier near the city of Issu, located just west of the Amanus range. In November 333, in the narrow plain outside the city, the contest took place. The Macedonian's victory was decisive — although Bryce concedes that the details of the battle are hazy. Under Alexander's influence, trade and commerce flourished on a scale unprecedented in the Near East — with a number of Syrian cities becoming focal points of an extensive trading network (p. 155).

In Part III, *The Rise of the Seleucid Empire* (pp. 157–217), we are once again in a transformed world, the world which began with the death of Alexander and the squabbles among his heirs over the spoils of his empire. Control of Syria was contested by Alexander's Ptolemaic and Seleucid heirs, with the latter finally prevailing. But the Seleucid Empire was to give way when Pompey the Great made Syria a part of the Roman world in 64 BC. Bryce underscores the point that following the death of Alexander, in 320 at a town called Triparadeisos in northern Syria, probably on the Orontes river, a meeting was convened that was to affect profoundly the future course of the history of both the eastern and western worlds. One of Alexander's most steadfast comrades, called Seleucus, was rewarded for his services with the satrapy of Babylonia. A new royal capital was established, Seleucia on the Tigris river. Occupying an excellent strategic position on a route which linked Iran with Syria and Anatolia via Mesopotamia, Seleucia rapidly became one of the great commercial centres of the Near Eastern World. It became a major centre for the spread of Greek civilization eastwards, for it was planned primarily as a Greek city, with a mixture of Jews, Syrians and other population groups in its citizen body. In 300, another Seleucia was founded, this one at the mouth of the Orontes, where there was an excellent harbour. But both Seleucias were to be eclipsed by another new city built by Seleucus, called Antioch, after his father Antiochus. It was well placed strategically, at the junction of several major routes which linked Anatolia with Syria and the Levantine coast, and to the east with the lands beyond the Euphrates. Many new cities arose in Syria, ensuring the continuing prosperity

of Syria as one of the great hubs of the international trade network. Disputes over the division of these strategic territories provoked an ongoing series of Syrian wars between Seleucid and Ptolemaic rulers, without any conclusive outcome until the Ptolemies were finally expelled from the region in 198 BC by Antiochus III, a later ruler of the Seleucid dynasty.

In Part IV, *Syria Under Roman Rule* (pp. 219–271), Rome becomes the dominant character in Syria's story. In the year 64 BC, Syria became a province of Rome. By and large the Syrian world was receptive to Roman rule, for its new overlord represented the hope of greater political and economic stability than the Seleucid regime had provided. The reader is reminded that Syria became one of Rome's most important provinces. The province of Syria as created by Pompey stretched to the Euphrates in the northeast, and Augustus had reached agreement with the Parthians that the Euphrates would mark the boundary between their empires. During the second half of the second century, Syria enjoyed increasing prosperity as goods from the east flowed through it to meet the ever more voracious demands of the markets of the west. The affluence of Syrian society becomes particularly evident in what was effectively a new era in Roman history, the so-called Severan period (AD 193–235).

In Part V, *The Rise and Fall of Palmyra* (pp. 273–323), the book tells the evocative story of Palmyra, focusing on queen Zenobia, who became one of Rome's most formidable enemies. Palmyra's oasis location in the Syrian desert mid-way between the Euphrates and the coastlands of Syria made it a natural focus of the caravan trade which brought the goods and products of a remote eastern world, from as far afield as Indonesia, China, and India, to the lands of the Mediterranean. For many centuries Palmyra (also known as Tadmor) played an important role in the history of regional and international Near Eastern trade. But it was in the first two centuries of the Roman imperial period that Palmyra experienced its greatest development. This was the time of the 'caravan cities' of Petra, Palmyra, and Hatra. By the early decades of the Roman Empire, the material transformation of Palmyra had begun, and in the following three centuries the city developed progressively, with its rich cultural mix, into one of the most distinctive centres of urban civilisation in the ancient Near East. Palmyra benefited greatly from its association with Rome, and enjoyed a highly privileged status in the Roman imperial period. A great boost to the city's fortunes came in AD 106 when Petra, capital of the Nabataean kingdom, was annexed along with the rest of the kingdom by the emperor Trajan. Palmyra's unique geographical position gave it a major advantage. It displayed many elements of a Greco-Roman city, but in fact, the distinctive Palmyrene culture arose from a blend of these elements with indigenous ones, the latter reflected in sculptural representations of a number of Palmyrene deities and cult memorials. In the reign of Septimius Severus, Palmyra was elevated to the status of a Roman *colonia*, the highest civic status that could be accorded a city of the empire. The inhabitants of Palmyra enjoyed full Roman citizenship rights. Around 250, Septimius Odenathus (known locally as Udaynath) a citizen of Palmyra makes his first appearance, and goes on to become a self-styled king. The death of Odenathus was sudden and unexpected and his widow Zenobia became *de facto* ruler of the Palmyrene world. Bryce notes Zenobia's ancestry is slight and confused, however, she sought to create about herself a court that was renowned for its culture and learning. Zenobia embarked on a programme of westward expansion; however, her territorial aspirations were unfulfilled. In one account she was taken to Rome and beheaded. In other sources Zenobia lived on in comfort and security in a house near Hadrian's villa.

Under the heading 'A blend of cultures' Bryce explains Palmyra's administrative structure, noting it was organised along Greek lines, with the institution of an assembly called by the Greek term *demos*, and a deliberative council called by the Greek term *boule* (p. 280). Greek and Latin nomenclature was widely used alongside Palmyrene terms. But Arabic was the most frequently heard language in the city's streets and thoroughfares. Probably at least half of the city's population was of Arabic origin, their ancestry could be traced back to nomadic desert wanderers. But the language most frequently appearing in the city's written records was Aramaic. Palmyrene is a local version of Aramaic. The Greek language also appears at Palmyra; many of the wealthier elements of the city's population spoke both Greek and Palmyrene. Given the city's active involvement in international trade, fluency in both languages was essential. Beneath its overlay of Graeco-Roman culture, Palmyra had many features that were reflective of Near Eastern cultural elements and traditions.

In ancient Syria, certain themes resurface and change over time. The story of the outsider made insider is one recurring theme amply represented in the military and political events that interests Bryce. It also becomes conspicuously apparent from the history of Syria presented in the current study that a feature of many of its ancient cities was linguistic diversity; it is a tradition that endured for centuries. But the diversity was not just limited to languages; Bryce's astute commentary includes abundant references to other diverse artistic, architectural, religious and cultural traditions of ancient Syria. These elements — from the Bronze Age royal palace (Palace G) and the Eblaite dynasty of Igrīš-Halab, Irkab-Damu and Išar-Damu (pp. 14–16), to the royal residence Kar-Shalmaneser ('Port Shalmaneser'), the Neo-Assyrian stronghold on the Euphrates River (p. 122), to the foundation of Seleucid cities (Seleucia, Antioch, and Apameia) (pp. 166–169), to Bosra, the provincial capital established under Trajan (p. 245), and the embellishment of Palmyra, desert oasis to royal capital, under Zenobia — all give context, fabric and texture to the historical narrative.

In reading this book I am reminded of my own experiences and associations with Syria that reach back several decades. In Syria, I found a country of imposing intact ruins, extraordinarily evocative landscapes, and hospitable, cultured peoples. I was fortunate to be involved in a number of archaeological excavation projects (including ten seasons excavating at Tell Ahmar, ancient *Til Barsib*, the site conquered by Shalmaneser III in 856 BC — and one of the important sites mentioned in Part I) in the Euphrates River valley. Over the years and in numerous conversations I frequently heard many Syrians describe (both ancient and modern) Syria as a 'mosaic.' For a lot of Syrians they see their country as made up of many discrete parts that fit neatly and harmoniously together. Bryce's book critically assembles the disparate historical segments of ancient Syria into a highly readable, accessible, intelligible whole. His book brings together 3000 years of history in crisp, focused, and informative fashion, allowing readers to form a clear picture of the rich history of this fascinating land. The author is an engaging writer and one quickly gets the impression that he has enjoyed researching and writing this book. The style is one that is not overly burdened with theoretical debate. Whilst the book is written primarily for non-specialists, it will be of interest to anyone with an interest in pre-Islamic ancient Syria.¹ There are too few books devoted to the history of Syria; therefore Bryce's study is a welcome edition and will, I am sure, become an indispensable reference for many years to come.

In closing, and with the current tragedy in Syria in mind, it is pertinent to return to that short statement made by Trevor Bryce at the beginning of his book: "Syria was strategically important" (p. 7). The unfolding conflict in Syria is a catastrophe on so many levels. Inevitably, Syria's heritage is one of multiple casualties resulting from armed conflict. Professor Trevor Bryce's publication provides a lucid account that assists our understanding of Syria's historical importance and continuing strategic location.²

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Michael D. Danti with contributions by Megan Cifarelli, 2013, *Hasanlu V: The Late Bronze and Iron I Periods*. Pp. 520, 8 color plates, 200 b/w illus. ISBN 978-1-934536-61-2 (Cloth); ISBN 978-1-934536-62-9 (Ebook).

In the second half of the twentieth century AD the University of Pennsylvania was responsible for two of the more important archaeological expeditions to the Near East, namely the Phrygian capital of Gordion in central Turkey and Hasanlu in northwestern Iran. At both sites there were stratigraphic sequences that are seminal to the understanding of broad geographic regions, together with exceptional and dramatic

¹ On the history of Syria since the arrival of Islam to modern day see most recently, Christian C. Sahner, *Among the Ruins: Syria Past and Present*, London: Hurst & Company, 2014. Like Trevor Bryce, Sahner's account is populated with important people. It too makes important connections between Syria's past, present and future.

² A modified version of this text also appeared in *Buried History* 50 (2014), pp. 43–45.

discoveries that now are mostly dated to the ninth century BC. Less favourably, both sites have suffered from a woeful deficiency of final excavation reports.¹ The volume under review goes some way to remedying that situation, as do recent monographs devoted to Gordion, but some 40 or more years since excavations were conducted final excavation reports devoted to the major burnt levels at both sites have yet to appear. Michael Danti's volume on Hasanlu level V, the Late Bronze and early Iron Ages, is therefore very welcome, the author fully deserving our grateful thanks for his labours that have culminated in a fine report on excavations in which he himself was not involved.

This hefty tome comprises 482 plus xxvii pages, eight colour inserts as well as a diagrammatic seriation with five folds that makes the equivalent of six pages printed on thick glossy paper and bound into the centre of the book. Additionally, there is a folded colour map of the regional survey, also printed on heavy glossy paper, in a pocket at the back of the volume. Altogether this makes for a solid and, in many ways, a rather traditional excavation report which sets out the results of excavation and regional survey. For a more general overview students will do well to turn to chapter 17 in the recent *Oxford Handbook of Ancient Iran* penned by the same author.² *Hasanlu V* is a book intended to be used and consulted rather than a book to read from cover to cover. Given the huge importance of Hasanlu for the archaeology of North-western Iran and, more broadly, greater Mesopotamia, one hopes that this is a harbinger of volumes, for there will surely be more than one, on the spectacular discoveries at Hasanlu IV that are yet to come. It is my opinion that such 'final' publications of seminal excavations that set out evidence and results as fully as is reasonably possible are essential to the discipline of archaeology. It must also be the case that publication in book form is some guarantee that copies will be available in institutional libraries for generations to come, long after current digital formats have become historical artefacts in their own right. Recent publication of another great North American excavation in Western Iran, Godin Tepe in the Central Zagros region, has been presented in a more general, and thus less satisfactory, way with only samples of evidence being presented to indicate how interpretations were reached.³

While there is a fascinating year-by-year account of the research goals set out with reference to evolving ideas and theories, which I will return to below, Danti does not provide an account of the day-to-day running of the expedition. There are no team photographs, nor images of work in progress. Trench supervisors and specialists are not listed, and there is no detailed account of the methods of digging and recording. Much of this information is to be found in interim accounts in the University's magazine *Expedition*, and while these lacunae may disappoint those following the current fad, if it may be called that, for studying expeditions themselves rather than their scientific results, they in no way detract from the presentation of the archaeological results. Elsewhere Danti has been justly scathing about the standards of excavation and recording, well below par even when judged by the standards of the time, but in this volume explicit criticism is largely confined to refutation of questions concerning the date of the Hasanlu IVb destruction raised by Medvedskaya and Magee (pp. 63–68), and an account of the rather dreadful excavation and recording of burials and victims (pp. 279–280).⁴

Chapter 1 begins with a good description of the Lake Urmia Region and the Ušnu-Solduz district in which Hasanlu is situated. Since this portion of the volume was written there has been a drastic and disastrous fall in the level of the salt lake, as can be seen on *Google earth*, as a result of the gross mismanagement of water resources in northwestern Iran. The second half of this same chapter is devoted to an outline of chronology. One of the most important conclusions concerns periodisation with new revisions concerning continuity and discontinuity. Major stratigraphic periods were identified during the course of the excavations and numbered from the top down as research progressed, hence Period I is the most recent while the earliest, late neolithic, is Period X. Attempts were made, and continually revised, to correlate these periods at Hasanlu with sequences at other sites. Furthermore, the Hasanlu Periods were made to fit into a developed version of the Three Age System first devised in northern Europe. Absolute chronology, based on

¹ Muscarella 2006 considers the publication record of Hasanlu.

² Danti 2013.

³ Gopnik and Rothman 2011.

⁴ Danti 2014.

radiocarbon determinations rather than dendrochronology, as well as ceramic parallels with Mesopotamia where sequences were dated by textual evidence, quickly demonstrated that the Middle Bronze, Late Bronze and Iron Ages as defined at Hasanlu were not synchronised with the sequence generally used for Anatolia. In short, the break at the end of the Late Bronze Age that is seen over much of the Eastern Mediterranean, and that brought to an end the complex literate civilisations of Mycenae, the Hittite Empire and the Levant as well as impacting on Egypt, did not spill over into Iran. As a result, Hasanlu Iron I, which does not contain iron, belongs to the period that archaeologists in Turkey and North Syria would term Late Bronze Age. On the plains of Northern Mesopotamia this difficulty is largely overcome by employing Old, Middle and Neo-Assyrian, a terminology that places due emphasis on broad continuity. It does help to have texts, but none have been found at Hasanlu. Danti has made revisions that now place most of Period V in the Late Bronze Age while making the last phase his new Period Vc, Iron I. Furthermore, continuity from Period Vc to VI is clearly demonstrated. There cannot have been an alternative to retaining the original periodisation of I to X, which has imbued the literature. On the other hand, precise matching of these periods to subdivisions of the Bronze and Iron Ages that are bracketed in calendar years perhaps compounds rather than clarifies difficulties because each major site has its own individual trajectory with event horizons that may not have occurred elsewhere. In part these problems stem from aspects of the site of Hasanlu itself as well as the excavated evidence which has, on the one hand, produced stratified sequences with architecture and some small amount of associated pottery and, on the other, burials containing groups of whole pots that can only be put into chronological order by means of seriation. Danti has dealt with this duality of evidence in exemplary fashion.

Chapter two defines Hasanlu Period V and then summarises the central research questions addressed by the expedition before laying out the “History of Scholarship”. In this latter part of the chapter Danti chose to set out the research design and major results for each season and its aftermath. This, perhaps, is the most engaging part of the book, one that could be read with profit by all students and practitioners of archaeology. Much of the Hasanlu expedition and its various offshoots, including the Godin Tepe excavations, have been focussed on the matching of material culture with peoples, language groups and polities. However, at Hasanlu itself there is no written or pictorial evidence on which to base such identifications. When the expedition began in 1956 much explanation for observed changes in archaeological assemblages was attributed to movements of peoples and changes of populations. At Hasanlu in particular, and more generally in Western Iran, the archaeological record was scrutinised for indications in the material culture that could be associated with the arrival of peoples speaking Indo-European languages, and specifically for the arrival of Medes and Persians. At the same time there were continuous efforts to match places and assemblages with polities and regions that were mentioned in Mesopotamian, especially Neo-Assyrian, and to a lesser extent Urartian texts. This was analogous to the resolution of the Hittite Question in Anatolia and not uncoincidentally, parallel to Pennsylvania’s work at Gordion where soundings sought recognition of the arrival of the Phrygians.⁵ Over several decades in the later part of the twentieth century AD, archaeological explanation that invoked migration was somewhat frowned upon, not least by the processualists. In some quarters, however, that approach was never discarded and, although more nuanced now than it was 30 or 40 years ago, studies of movements of peoples and migrations have seen something of a revival.⁶

The third chapter, ‘Reanalysis of “Hasanlu V”: Stratigraphy, Architecture, and Radiocarbon Dating’, incorporates already published results from the nearby site of Dinkha Tepe. At Hasanlu each of the excavated areas are dealt with individually, firstly on the High Mound and then on the Low Mound. Essentially, it was in the late Period V–IVc, that the High Mound took its present form and the first columned halls were built. Retaining traditional terminology, Period V is assigned to the Late Bronze Age (LBA, 1450–1250); IVc to Iron I (1250–1050). Circumstantial evidence suggests the citadel was fortified in this period. Earlier in Late Bronze Age Period V meagre results are sufficient to demonstrate that the High Mound was quite different, no monumental architecture having been encountered. While the layout of the Iron II

⁵ Voigt and Henrickson 2000.

⁶ Most recently Potts 2014.

citadel was significantly altered from that of Iron I, the general character seems already to have been established. As to the Low Mound, Period V saw graves in an extramural cemetery followed by Iron II settlement, most notably the so-called Artisan's House (BBXIII). Danti has included clear plans and sections to demonstrate the data on which his analysis is based. Appendix III provides a concordance of Section Numbers and Stratum Descriptions. Students without experience of excavation in the field should be made aware that these section drawings and descriptions often bear little relation to the way in which the levels were actually dug. Rather, they represent post-excavation ordering of field records so as to make a report that is as coherent as possible. No attempt has been made at an all-inclusive stratigraphic scheme that embraces strata in different operations, clearly an impossible task in the absence of key sections to link the different areas. Nevertheless, the basic scheme is as clear as could be wished and, at the same time, presented with due caution and reservation. Radiocarbon dates are frequently referred to because these provide broad dates for each of the periods. These radiocarbon determinations, all of which have been previously published, are set out in tabular form with new calibrations in Appendix II. There are no surprises here, a date around the late ninth century for the destruction of Period VIb being supported. The radiocarbon evidence is usefully summarised in two colour charts, C₃ and C₄.

An overview of the ceramic assemblages makes up chapter 4, concluding with four charts that summarise changes in shape according to the division into periods and the large folding chart already mentioned. Here an explosion of bowl types characterises the division between Period VIA and Early V while the change from Early to Late V is indicated by new jar types. These changes notwithstanding, the general trend marks continuity rather than abrupt change. Strategies of pottery collection and recording did not permit quantitative or spatial studies at Hasanlu itself, with the result that what is here presented is typological with an emphasis on chronology and periodisation. The starting point for this chapter was Kramer's seminal study of the Dinka IV assemblage. Her results are visually presented in three full page colour pie charts and a frequency diagram. All in all this chapter reflects strategies, or lack of them, in the field together with the concerns of the excavators at the time. This careful study corrects earlier and more superficial reports in which, perhaps, the pottery evidence was forced to support preconceived ideas. The evidence set out here will be crucial to further research in the region and to the study and publication of old excavations and surveys as well as to new fieldwork.

The fifth chapter reports on the Middle Bronze, Late Bronze and Iron I graves from both Hasanlu and Dinkha. The term extramural is used for burials outside buildings, intramural for burials within. This usage is clear, although it will seem odd to those who think of extramural cemeteries as being outside the surrounding walls of settlements. Chronological implications of this difference can be discarded, as can earlier literature that exaggerated its significance. The revised dating has important implications for other Late Bronze Age and Iron I burials, not least at Yanik Tepe to the northeast of Lake Urmia. Danti has presented such sketches and diagrams of each burial as were made in the field together with drawings of the grave goods. These are in the order of the number assigned to each burial at Dinkha followed by the Hasanlu burials by SK (skeleton) number. Appendix IVa catalogues the Hasanlu VIIb–IVc burials by period, Appendix IVb catalogues those from the Low Mound. Sex and age determinations from Selinsky's unpublished doctoral study are provided where available. Personal ornaments from the burials are described in a short chapter by Megan Cifarelli, and catalogued in Appendix VI.

The first appendix, together with a large folding colour map in a pocket at the back, is a catalogue of sites recorded in the archaeological survey and reconnaissance of the Ušnu-Solduz region. There are no photographs or plans of any of the sites, nor illustrations of collected material. All known sites, including those in published Italian and German reports, are incorporated.

The final chapter, "Conclusions" re-emphasises some of the more important results. Crucial is refutation of a major cultural break linked to migration in the middle of the second millennium. Such break as there is, in Danti's convincing view, comes with terminal Middle Bronze (MB)II. This is to be dated to the 17th century BC. One result of this study is reinforcement of the differences between the Ušnu-Solduz region to the south of lake Urmia and the northern part of the Urmia basin in the Middle Bronze Age. Following the work of Charles Burney and Antonio Sagona, I have myself suggested that the Early Trans-Caucasian (ETC) at Haftavan Tepe, Yanik Tepe, and elsewhere continued into the second millennium, perhaps by as much as two or

three hundred years.⁷ Crucial here is the date at which Urmia Ware, or Yayla Ware as it is called in eastern Turkey, replaces Early Trans-Caucasian monochrome pottery. While there is clearly a minor issue of dating here that is still to be resolved, it has little direct bearing on the volume under review except to stress that from the time of Hasanlu later V, that is, the later part of the Late Bronze Age, the northern region became culturally closer to the south. Another outcome is that the 'missing second millennium' is no longer missing, with the result that nomadism need no longer be invoked as an explanation. Absolute dates, based on currently inadequate radiocarbon dates, will be refined, but periodisation has now been firmly established together with the broad chronological outlines. Despite the extraordinary wealth of finds in the destruction of Period IV, its long sequence of Late Bronze Age and Iron I antecedents that are the subject of this volume, and the prominence of Hasanlu in the archaeological literature, the ancient name of the city and the state of which it was the capital is elusive, the language of its people unknown. Writing, sealing and related administration did not penetrate northwest Iranian polities, evidence for trade is slight. The development of Hasanlu in the Late Bronze Age and Iron Ages was essentially a northwest Iranian florescence. Of course it was subject to influences from its neighbours, particularly northern Mesopotamia and the Habur, but the architecture, ceramics and objects represent local developments. In spite of all the shortcomings, Robert Dyson's excavations at Hasanlu were the starting point for many careers in Near Eastern archaeology while the discoveries that he made gave due importance to western Iran in the Iron Age. Danti is to be commended for making the results so clearly accessible a generation after political events brought about an end to large scale fieldwork by western scholars.

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⁷ Summers 2013.

Giuseppe Minunno, 2013, *Ritual Employs of Birds in Ancient Syria-Palestine*. Alter Orient und Altes Testament, vol. 402. Münster: Ugarit-Verlag. Pp. 165. ISBN 978-3-86835-083-8. €64.

This revision of a dissertation submitted to Rome's University "La Sapienza" aims "to reconstruct as fully as possible the *historical development* of ritual activities [involving birds] and their interpretation" in the ancient Levant (p. 19, author's italics). The author devotes most of his pages to describing the use of avian victims in rites from Emar (Chapter II), Ugarit (Chapter III), the Hebrew Bible (Chapter V), and at Phoenician and Punic sites (Chapter VI). Shorter sections deal with the relevant material from Ebla, Mari, and Alalakh (Chapter IV) and from the Hittite capital Boğazköy/Hattusa (Chapter VII).

Minunno determines that, apart from a few instances scattered across diverse cultures in which the sacrifice of a bird is a cheap alternative for a poor worshiper unable to afford a sheep or goat, the employment of fowl in cult falls into two main categories: offerings for chthonic deities on the one hand and use in purification on the other (p. 127). Furthermore, he observes that the former practice probably arose in the Syro-Palestinian region, while the latter was a product of Hurro-Hittite cult (p. 128). This conclusion indeed seems to be justified on the basis of the limited evidence currently available, which is unfortunately especially exiguous for the Middle Bronze Age and earlier. Clearly we could be more confident about origins and historical development of the religious customs under review if we knew more about rites from the early second and late third millennia.

Although this volume is relatively short, it would have been a better work if it had been even briefer, for it reveals its origins as a dissertation by adducing seemingly all views on a given question, only to rehearse them once more in the summary of each chapter. Such repetition may induce a soporific state in some readers.

Minunno is also clearly more at home in the West Semitic languages and scripts than with the cuneiform sources. As may be seen from the selected particular comments that follow below, texts from Emar are frequently mistransliterated, mistranslated, inconsistently rendered, or misunderstood. As illustrated by the book's title, the English style is often clumsy, and in addition there are numerous lapses in editing and proofreading.

P. 17, n. 49: "Grottanelli 1984" is not to be found in the bibliography.

P. 32: *šinapši* is not a deity but a cultic structure.

P. 33, l. 18': *a-na ḫal-ba* here is translated on the following page as "in Ḫalma." In fact, this is a divine name and should be transliterated ^{<d>}*Ḫal-ma'*.

P. 36: *tarna-* is a measure of weight, not a vessel, despite Arnaud's rendering in his primary edition. Read l. 4': ... 1 *tar-na-aš* GEŠTIN.Ḫ[AD.DU(A)], "one *tarna* of raisins."

Pp. 44-45: The birds depicted in the seal impressions in Figures 1 and 2 are not offerings, but symbols or avatars of the personages who carry them, namely a horned god standing on mountains in Fig. 1 and a variety of the forward-facing naked goddess in Fig. 2. For birds as "mascots," cf. the author's own remarks on pp. 131-32 with n. 756.

P. 90: *usandû*, "fowler; bird breeder; augur (Bo.)" is an Akkadian word, not Hittite as (perhaps unintentionally) implied by the author's discussion. As far as I am aware, this lexeme never appears as an Akkadogram at Boğazköy but only as the Sumerogram ^{LÜ}MUŠEN.DÛ.

P. 122: Minunno has mischaracterised the Hittite text known as "Mursili's Aphasia" (CTH 486). The disturbance of the king's speech was not confined to his dreams, but was caused by a real-life experience of a frightening thunder storm. Although the king had forgotten about the incident, his aphasia later returned after he relived the event in a dream.

We may be grateful to Dr Minunno for gathering all this information, but the definitive study of the use of birds in Levantine worship has yet to be written.

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Wolfram Grajetzki, 2014, *Tomb Treasures of the Late Middle Kingdom The Archaeology of Female Burials*, Philadelphia: University of Pennsylvania Press. Pp. 254, 104 b/w plates. ISBN 978-0-8122-4567-7 (Cloth).

Grajetzki nominates the 150-year timespan c. 1850–1700 BCE as the late Middle Kingdom, and identifies this as a period which has provided a rich source of well provenanced material excavated from female burials. Acknowledging the jewellery found in these graves has been regularly published, he is of the opinion the other objects recovered have been largely ignored. The primary aim of his study is therefore to consider these burials within a more holistic framework.

Excluding introduction and appendix, there are 171 pages of text in the book. Of this total the first chapter consumes 76 pages and must therefore be considered central to the publication. This major part of the study is devoted to those burials known as court type, a term adopted in the 1916 publication of the excavation of the tomb of Senebtisi by Mace and Winlock.¹ The terminology was framed based on the conclusion that the burial goods found in tombs of this type identified members of the royal court of the Twelfth Dynasty. The tomb of Senebtisi provides an appropriate starting point for Grajetzki's consideration of the illuminating contents of female burials of the late Middle Kingdom. An extensive number of black and white plates reprinted from the Mace and Winlock publication provide excellent visual reference for the fine collection of material recovered from the tomb. The features of the set of three coffins are examined, and the jewellery follows. This selection includes golden hair ornaments, beaded collars, a beaded apron depicting the lotus and papyrus symbolising Upper and Lower Egypt, and armlets and anklets featuring gilded wood and faience beads. A selection of weapons which were revealed in the second coffin is described and illustrated, as are the canopic jars and the numerous pottery vessels. Grajetzki notes that although this burial has much in common with burials of royal women in the period subject to study, the pottery draws comparison with that found in private burials. This is consistent with Senebtisi's non-royal status, and the observation in Susan Allen's 1998 paper considering royal funerary pottery in the Middle Kingdom that even in the richest non-royal burials, such as that of Senebtisi, the pottery type described as Queens' Ware was not found.²

The contents of the tomb of the king's daughter Sathathoriunet, excavated in 1914 by William M. Flinders Petrie and Guy Brunton are then considered. Although extensively robbed, the tomb contained an intact niche full of jewellery, most of which is now considered one of the viewing highlights at the Metropolitan Museum of Art in New York. Herbert Winlock, during his tenure in the Egyptian Department at the Metropolitan, published a detailed study of this jewellery.³ Grajetzki's book undertakes a meticulous examination of Winlock's reconstructions. Extensive imagery from both Brunton and Winlock is republished by Grajetzki. The selection of illustrations include a jewellery box, Sathathoriunet's crown, pectorals, pendants, armlets, girdles, mirrors, razors and cosmetic vessels. All imagery is fully supported by extensive description. The pottery vessels are again examined, and in this instance the presence of Queens' Ware is noted.

Following extensive examination of the two aforementioned excavations at Lisht, the contents of a number of female burials at Dahshur are then considered. These include kings daughters Ita, Khenmet, Neferuptah, Nubhetepi-Khered, Sathathor, and Mereret. The objects recovered from the tombs of each of these women again fully scrutinised in the same format as undertaken throughout this chapter.

At the end, for each section which is headed by tomb owner name, and therefore following the description and examination of the objects found in each tomb, the question of 'who was N' is considered. These paragraphs offer Grajetzki's perception of the information revealed about each tomb owner as a result of an examination of the entirety of her burial goods. Although some of this detail is already well understood, drawing together all observations together within the framework of an examination of the entire corpus of objects recovered from each burial provides a more rounded insight. This approach therefore fulfils the primary aim of the study.

¹ Mace and Winlock 1916.

² Allen 1998.

³ Winlock 1934.

Chapter 2, rather more briefly than the detail included in Chapter 1, examines what Grajetzki considers significant undisturbed tombs of other women who were not buried in the court style. This material is presented for the purpose of comparison, and as a means to more fully understand the court type burials. The chapter addresses three tombs at Saqqara housing the burials of the lady Hetepet, three unidentified women, and a child. Non-court type burials at Dahshur, Harageh, Riqqeh, Beni Hassan, Matmar, Rifeh, Abydos, Hu, Kubanieh North, and Buhen are also examined. Descriptive information for each of these burials is presented. Grajetzki offers his conclusions at the commencement, rather than the end of this chapter, noting some commonality with the jewellery found in court type burials, but an obvious difference in the other goods recovered, most visibly the lack of objects produced specifically for the grave. He contends it is possible all of the jewellery found was worn in daily life, and suggests with a cautionary note that given the prevalent looting of graves, it might be concluded if jewellery was found in a tomb, presuming it would be the first to be stolen, the other burial equipment may be considered complete. On the basis of the material examined, the lack of familiar Middle Kingdom grave goods such as faience animal figurines and fruit models, magical ivory wands, shabtis, heart scarabs, canopic jars and canopic boxes is noted, perhaps indicating a paucity of these materials in the late Middle Kingdom. This is interestingly interpreted as offering stark contrast to the tombs containing rich jewellery, which this study indicates were much more common.

The third chapter explores the type of jewellery found in late Middle Kingdom tombs, those pieces made specifically as burial goods, and those which were probably worn in daily life and taken to the afterlife. In addition to object-based evidence, depictions in art are also considered. Figurines generally described in an Egyptological context as concubines are considered an important source for depiction of jewellery during the period under study. Grajetzki provides extensive description of each predominant jewellery type, including depictions outside of the late Middle Kingdom, thus allowing opportunity to consider historical origins. In concluding this chapter the identification of two types of jewellery in late Middle Kingdom burials is reinforced — objects made specifically as grave goods, and those that had been worn in daily life, even if only in the celebration of specific important events. Daily-life jewellery is interpreted as being more gender specific, while court type burial jewellery, and objects specifically produced as funerary goods, are observed as more gender neutral.

Chapter 4 surveys the chronological development of ancient Egyptian burial customs from the Predynastic and Early Dynastic periods through to the late New Kingdom and after. Again the burial goods of a number of tombs are described, with particular attention given to female burials. This survey is conducted with the intention of placing late Middle Kingdom burials in context, and to support the particular features of the period studied by Grajetzki and observed in previous chapters. This chapter concludes by considering the burial practice identified for rich women of other cultures for the purpose of comparative study.

The fifth and final chapter is very brief, only nine pages carrying the title *The King and the Women Buried Around Him*. In the opening paragraph the significance of the burial of kings with only women placed around them is noted, making specific reference to the complexes of Pepy I and II, a pattern again evidenced in the Twelfth Dynasty. Grajetzki reflects on the significance of the placement of only women around the king during the Middle Kingdom. The role of the deity Hathor and her connection to the concept of kingship and the royal women, and depictions of the king's children in tomb decorations and literary compositions, and their role in rebirth rituals is discussed. In the concluding paragraphs of the book the notion of the burial of female family members and children around a king is interpreted as facilitating rebirth, and the tomb complex is powerfully described as a 'machine for surviving death'.

An appendix details a list of the royal women of the Twelfth Dynasty under the names of the kings with whom they are associated. They are identified as mothers, wives or daughters.

This is a book which will be welcomed by those who have a general interest in ancient Egypt, and scholars those who are keen to further explore the lives of ancient Egyptian women beyond those bearing the most famous names with whom we are most familiar. In his introduction Grajetzki refers to those privileges which support the suggestion that ancient Egyptian women enjoyed rights which females in other ancient cultures did not, but he concludes there is no doubt that in the period covered by the book ancient Egypt

was a 'fully patriarchal society.' This notion of the female place in societal structure is briefly mentioned within the final paragraph of Chapter 3, in contemplation of the specific purpose of the jewellery owned by the women who were the subject of this study — was it worn to appeal to others, or as an expression of self? Grajetzki acknowledges this as a problem he is unable to resolve, on the basis that the literature on the subject is generally written by men and therefore reflects their view. As a burgeoning field of interest in the study of Egyptology, gender roles and depictions which inform their study will facilitate future exploration of this question. We can therefore look forward to future work, whether by Grajetzki or others, which continues to develop a fully inclusive framework in which the female population of ancient Egypt, outside of the most important royal women, can be more fully considered.

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John Baines, 2013, *High Culture and Experience in Ancient Egypt*. Sheffield: Equinox. Pp. xix + 327. ISBN: 978-1-84553-300-7 (Cloth).

This book contains a collection of studies aimed at illustrating what it meant to be a member of elite society in ancient Egypt, and how the surviving evidence illustrates these meanings.

The theory and methodology behind the book is outlined in Chapter 1 ("Contexts and representations of high culture"). Here, the author sets out the limitations of the evidence for elite experience in ancient Egypt (for example, the restriction of iconographic representations to canonical themes and activities), as well as the limitations imposed by past interpretations of this evidence (for example, an inordinate focus on the role of the king and the elite in maintaining *ma'at*, at the expense of a focus on their role in maintaining their own centrality in Egyptian society).

Chapter 2 ("Egypt as physical, social, and represented landscape") consists of a study of the ways in which the elite ordered and represented the Egyptian landscape so as to express and promote their own prevailing ideologies, hierarchies and aesthetics, as well as their own interests. The author focuses on iconographic and textual evidence pertaining to three chief aspects of the Egyptian environment: (1) managed landscapes (agricultural land, estates, gardens, and so on) as expressions both of *ma'at* and of elite control over the environment; (2) the disordered marshes of the Fayyum and the Delta as places of pleasure and regeneration for the elite, and as sources of valuable commodities that the elite could exploit; and (3) the low desert as an arena for elite mortuary display, in which non-elites also participated through ritual visits.

Elite involvement in the creation and ordering of the urban environment, including urban planning and settlement patterns, is the subject of Chapter 3 ("A planned world? The early city, patterns and meanings of settlement"). This chapter focuses particularly on the reorganization of the urban environment around

a single political centre (the Memphite region) in the Old Kingdom, after the initial creation of a unified state. This reorganization, in which the creation and maintenance of elite-run estates played an especially important role, appears to have been expressly designed to consolidate the power of the king and of the elite through coordinated exploitation of the land.

The notion of the marshes as places of elite recreation is excellently illustrated by Chapter 4 ("Celebration in the landscape: a hunting party under Amenemhat II"), a case study of a royal hunting expedition into the Fayyum. Here, the author illustrates the polysemic nature of the ancient Egyptian royal hunt: notions of relaxation and enjoyment were involved, certainly, but as a sport unrelated to subsistence, the royal hunt was also a manifestation of elite privilege, as well as a powerful symbol of *ma'at* (as embodied by the king) prevailing over the forces of chaos (as represented by the disordered environment of the marshes). In this latter sense, the royal hunt can also be viewed as an analogue of a military campaign, with the "enemy" here being the wild and untamed nature of the marshes. Thus in the royal hunt, elite society is once again reinforcing and perpetuating itself through symbolic action.

The themes and evidence of the preceding chapters are tied together in Chapter 5 ("Elite experience"), in which the notion is introduced that much elite iconography and text, in addition to structuring and reinforcing elite identity, is also aimed at entertaining the elite themselves, as a mitigation to the unrelenting work involved in maintaining the centrality of the elite in Egyptian society. This chapter illustrates one of the best aspects of this book: a stubborn focus not just on the evidence for elite experience in ancient Egypt, but on the *human beings* who lived this experience. If the point of archaeology is to move beyond the archaeological evidence toward an understanding of the *people* who produced this evidence, then this book is an admirable success.

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Jane A. Hill, Philip Jones and Antonio J. Morales (eds), 2011, *Experiencing Power, Generating Authority: Cosmos, Politics and the Ideology of Kingship in Ancient Egypt and Mesopotamia*. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology. Pp. xxx + 448, 49 figures, 11 tables. ISBN 9781934536643 (Cloth); 9781934536650 (Ebook).

This book is the published proceedings of a four-day workshop of the same name held at the University of Pennsylvania Museum of Archaeology and Anthropology in November 2007.¹ The editors, Jane A. Hill, Philip Jones and Antonio J. Morales, have produced a handsome volume comprising a collection of papers on specialised topics that build a picture of kingship in Egypt and Mesopotamia. The inspiration for this volume is the influential work of Henri Frankfort, in particular his 1948 comparative study, *Kingship and the Gods*, which saw the institution of kingship in Egypt and Mesopotamia functioning as the nexus and harmoniser of the human and cosmic realms. The editors have structured the scholarly contributions according to three major themes raised by Frankfort's work: the relationship between kingship and the cosmos; the political authority of kingship; and the royal exploitation of landscapes. This book, however, does not constitute a comparative analysis of kingship in Egypt and Mesopotamia. Each chapter concentrates on a particular aspect of the royal institution in either Egypt or Mesopotamia and the scholars seldom make actual comparison between cultures or periods.²

The book opens with an essay by the editors (pp. 3–29) that outlines a historiography of the topic and draws out the connections and underlying themes which emerge from the chapters in the book. Themes of

¹ The editors point out (p. xxviii) that Parker 2011 was also presented at the workshop, but published elsewhere.

² For recent examples of the comparative method in Ancient Near Eastern studies see Weeks 2004 and Jackson 2008.

particular importance are the royal use of violence, centralised control over the circulation of goods, royal legitimisation, the problems associated with the death of a king, and the role of the elite in politics. The editors acknowledge that their emphasis is on the similarities between the roles and practices of kingship in Egypt and Mesopotamia (pp. 25–26). However, this presents problems for the reader who may not recognise the significant changes that occurred over time in both regions or the diversity of cultures (and therefore the institution of kingship) in Mesopotamian history.³

The first part comprises five essays on cosmic aspects of royal authority. Ellen F. Morris (Ch. 1, pp. 33–64) and Ludwig D. Morenz (Ch. 4, pp. 121–149) examine the iconography of Proto-Dynastic artefacts from ancient Egypt to determine early pharaonic symbols of power. Both authors argue that the central themes of pharaonic kingship known from later periods are exhibited in the Early Dynastic art and monuments. For Morris the artefacts from Abydos demonstrate that the pharaoh was supra-human, chosen by the gods, militant expansionist, embodiment of the unified state and chief administrator. Morenz takes a semiotic approach to elucidating the “semiophores” of the era. Particular attention is paid to decoding the depiction and arrangement of animals and mixed beings on ritual objects as symbols of the military and religious aspects of Egyptian kingship.

The three chapters on Mesopotamian kingship, where the cosmic dimensions of the royal institution (as examined here) are concerned with protection, justice and stability on earth, draw a significant contrast with those on Egypt. Dominic Charpin (Ch. 2, pp. 65–96) and Eckart Frahm (Ch. 3, pp. 97–120) examine the role of solar theology in Old Babylonian and Neo-Assyrian kingship, respectively. Despite the temporal and cultural differences between the subjects of these two studies, the results of both investigations reveal the kings’ connection with the sun-god, Šamaš, was important for he was the god of justice and divination. In this way, the kings’ association with the sun god went beyond simple metaphors of power and authority, but also represented stability, protection (through light and justice) and the ability to counter challenges to the kings’ realms (through divination). JoAnn Scurlock, on the other hand, finds similar notions of Mesopotamian kingship in a rather different mythical association: between the king and the netherworld. The kings’ connection with death and the afterlife was chiefly explored through the myths concerning Dumuzi/Tammuz — the dying and rising god and archetypal shepherd. After a lengthy study of royal death and the character of Dumuzi/Tammuz, Scurlock argues that the royal association with this god was not about traditional notions of power over humans, death or the afterlife, but rather royal responsibility for the protection of their people — the kings as a “good shepherd.”

The second part of the book comprises five chapters on kingship and politics. Juan Carlos Moreno García (Ch. 6, pp. 185–217) and Miroslav Bárta (Ch. 8, pp. 257–183) look at the relationships between the royal centres and the broader administrative systems in Egypt. Moreno García challenges the notion that Egypt emerged from the Pre-Dynastic era as a unified political entity and argues that Hierakonpolis managed to integrate the regional centres into a political network. Moreno García builds his case on an economic model that saw the Pharaonic state expand through agricultural centres and land grants to regional temple estates — a process that enabled them to mediate the burgeoning elites from the end of the Old Kingdom on.

Bárta looks at the development of the royal bureaucracy during the Old to Middle Kingdom periods. By examining funerary architecture and the officials’ tomb biographies, contrasted with the reduction in monumental royal building, Bárta renews and develops an older argument that the period from the fourth to sixth dynasties saw major shifts in the officialdom from an administration dominated by the royal family to a powerful non-royal elite.⁴ By the sixth dynasty the pharaohs formed links with provincial elites to check the power of the more recent bureaucrats in the centres.

Three chapters consider diverse topics in Mesopotamian political systems. Walter Sallaberger (Ch. 7, pp. 219–255) examines mainly the archives from Ebla, Puzrish-Dagan and Mari to define the nature of palatial economies across Mesopotamian history. Sallaberger’s findings reveal an important distinction in the roles played by these institutions: the temple redistributed staples and utilitarian goods while the palace

³ This point is raised by Michael Roaf on p. 332.

⁴ Cf. Kanawati 1980.

circulated prestige goods. The palace economies functioned by organising the movement of goods between major centres and provinces which in turn enabled the throne to control the distribution of luxury items. Some important consequences of this system were the ability of the crown to manage officialdom and the army by controlling their access to the said goods, and the fact that temples did not, then, have a share in political authority in Mesopotamian kingdoms (as has been argued by others). Beate Pongratz-Leisten (Ch. 9, pp. 285–309) discusses the relationship between the Neo-Assyrian kings and their scholars and elite officials. Using royal literary and archival texts, her significant finding is that it was the court scholars upon whom the king relied for the construction of the royal *persona* and guidance in royal decision making.⁵ Finally, D. Bruce Dickson (Ch. 10, pp. 311–328) examines the royal tombs and death pits from Ur as a case study for understanding early state formation in Mesopotamia. Dickson uses conflict theory to challenge Woolley's thesis that those interred with the king went willingly to the grave. Instead, Dickson argues that the bodies belong to lower class victims of structured violence that aimed to establish the authority of the state.

The third part of the book contains three chapters that examine one of the central theses of Frankfort's work: the relationship between kingship and landscapes. None of the contributions follow Frankfort's geographical determinist approach. It has long been recognised that building and kingship went hand-in-hand in Mesopotamia. However, Michael Roaf (Ch. 11, pp. 331–359) looks at how and why Mesopotamian kings sought to reshape the landscape by building and refurbishing monumental structures, humorously (but accurately) named an “edifice complex”. Importantly, Roaf points out that there was no single Mesopotamian “kingship” or “ideology,” but a plurality of cultures (Sumero-Babylonian, Assyrian, Persian, *etc.*) which came with different ideas and practices which formed the royal prerogative. Yet, building was a constant across the millennia. For Roaf building was not only about dominating new landscapes and extending a ruler's presence. A construction project on a new site could be a standing legacy of a powerful ruler long after his death, while a refurbishment of an existing structure was a method of connecting with rulers past.

Alan B. Lloyd's contribution (Ch. 12, pp. 361–382) is narrower and presents a close reading of five inscriptions from the Wadi Hammamat — four from the reign of Mentuhotep IV (Middle Kingdom) and one from the reign of Ramesses IV (New Kingdom). The consistencies found in the terms used to describe the region and its resources together with the association with protective deities such as Min, lead Lloyd to the convincing conclusion that the pharaohs considered the eastern desert region, not as a region for exploitation alone, but one of a sacred nature. In this way, success in the quarrying and mining expeditions to this region was understood to be confirmation of divine support for the pharaoh.

The final essay by Mahmet-Ali Ataç (Ch. 13, pp. 383–423) shifts the focus from the physical environment to the conceptions of landscapes in Assyrian art. Quite in keeping with Ataç's other studies of art and ideology,⁶ he draws on texts and cross cultural comparisons with ancient Egyptian, Greek and Islamic concepts to inform his findings. Here his central thesis is that the inclusion of non-native flora, fauna and landscapes in Assyrian art (and texts) represents expanding the familiar world (*oikoumene*) to encompass “imaginal” territory beyond. This idea is in keeping with work conducted by the “Italian School” of Assyriology which argues that a key concept in Assyrian imperialism was the spreading of the cosmic ordered centre to the chaotic external world through conquest and collecting.⁷

On a final note, this volume has been edited well and there are very few errors. However, there seems to have been a corruption with Scurlock's chapter where Ashurnasirpal II's name has been replaced with Ashurbanipal's (pp. 155 and 173).

There is no question about the quality of the papers contained in this volume, nor the editors' efforts to identify consistent issues that arise through the study of Egyptian and Mesopotamian forms of kingship. Indeed, scholars will profit from consulting this volume. However, one cannot help but feel the time is now ripe for a new comparative study of kingship and power, not only in Egypt and Mesopotamia, but also other Near Eastern societies such as Hittite Anatolia, Persia and Ancient Israel and Judah.

⁵ Similar findings have been produced by Radner 2011, cf. Frahm 2011.

⁶ Ataç 2010.

⁷ A foundational study of the Italian School is Liverani 1979.

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S.W. Flynn, 2014, *YHWH is King. The Development of Divine Kingship in Israel*, Supplements to Vetus Testamentum 159. Leiden: Brill. Pp. 207 + i-xiii. ISBN 978-90-04-26303-1 (Cloth).

Alexander Samely in collaboration with Philip Alexander, Rocco Bernasconi and Robert Hayward, 2013, *Profiling Jewish Literature in Antiquity*. Oxford: Oxford University Press. Pp. xvi + 459. ISBN 978-0-19-968432-8 (Cloth).

YHWH is King. The Development of Divine Kingship in Israel is a published Ph.D. thesis written under the supervision of Glen Taylor at the University of Toronto. It has six chapters, the first being an introduction and the last a conclusion. As the title indicates, the focus is on the Kingship of Yahweh, a topic that

has been little researched in recent years, although it was a popular one in the earlier part of the twentieth century. It was then that Sigmund Mowinckel's thesis in his work, *The Psalms in Israel's Worship*, was published. He claimed that behind the Psalms extolling Yhwh as king (Pss. 47, 93, 95-100), there lies an annual Enthronement Festival which celebrated Yhwh's victory over chaos. This led to those psalms being viewed as the starting point for any scholarly discussion of divine kingship. Flynn takes issue with this singular approach and seeks to show that there was a development in the concept of divine kingship over the course of Israel's history and that it embodied particular features at two different stages. Further, Flynn attempts to explain why and when this happened.

In Chapter One, after delineating scholarly views about the nature of Yhwh's kingship, Flynn discusses methodologies that can be applied to discern whether development has occurred. He concludes that there are two: linguistic dating of the Hebrew and the kind of deity described in particular passages, although recent criticisms about the validity of linguistic dating lead him to confine his remarks on the likely date of the language to footnotes and to put greater emphasis on the type of god a text describes. He outlines recent scholarly views on early Israelite religion and on Yhwh in the context of Ancient Near Eastern deities and points out that two leading scholars see Ugarit and the El/Baal myths as important contextually for the early development of Yahwism. After a discussion of the relative positions of El and Baal and their respective characteristics which themselves develop over time, Flynn compares what is said about them in terms of the warrior tradition. He then looks to see how the results align with the same motif as it appears a) in passages he deems to be early in the Hebrew Bible and b) in the Israelite "Enthronement" psalms. There are strong similarities between the first group and the El/Baal texts but weaker echoes in the second.

In Chapter Two, Flynn analyses Pss. 93; 95-99 in terms of how they express Yhwh's Kingship. He demonstrates that in them Yhwh is a universal creator king whose power is absolute. By contrast in the "early" Biblical passages in Exod 15:1-18; Numbers 22; Deut 33:5 and Psalm 29, Flynn finds that Yhwh's warrior status is emphasised but his kingship is localised and relates to a particular people and land. Flynn asks what led to the change.

In Chapter Three, Flynn explains the methodology of Cultural Translation by which he will attempt to answer his own question. It is a method from social anthropology whereby an ethnographer translates the culture under observation to another culture. It has been used recently to consider the nature of the deity in Biblical thought in the context of Ancient Near Eastern deities. First the deity in the ANE culture must be considered to see whether different characteristics were associated with it over time; and, if so, why that came about. Only then, says Flynn, should the same questions be applied to the picture of the deity in the culture one wishes to profile — in this case the Israelite one. The aim is to find out whether the picture of Yhwh resonates with the deity in a different culture and if the deity has changed in a similar way then one has to search for the situation that triggered that.

In Chapter Four, Flynn applies Cultural Translation to Marduk's rise in Babylon with the ultimate aim of seeing whether it can increase understanding of Yhwh's rise in Judah. He explores Marduk's place in the Enuma Elish and in the Babylonian and Assyrian contexts. He claims that Marduk developed into a universal and absolute king who was both a warrior and a creator. He argues that the reason for Marduk's elevation in Babylon was a response to the threat of Neo-Assyrian imperialism. He is aware though of the insubstantial nature of his own conclusion when he admits that more detailed work about Babylonian scribal culture and study of more Babylonian texts would be required to assess their reaction to Assyrian Imperialism before the conclusion can be more definite.

In Chapter Five, Flynn begins by saying, "The analysis of chapter two solidified different stages in YHWH's kingship: a 12th-10th century YHWH warrior king as well as an 8th century Jerusalemite YHWH who is a creator and universal king." (p. 119) The specification of particular centuries here strikes an odd note for although in Chapter Two Flynn adopted the views of some recent scholars that the "Enthronement" psalms are pre-exilic, rather than post-exilic as previously thought, he was no more precise than that. It seems that he is paving the way for his argument that the view of Yhwh's kingship in the Enthronement psalms came into being in response to Neo-Assyrian Imperialism initiated by Tiglath-Pileser III in the eighth century. Prior to doing so, Flynn outlines the respective "histories" of Marduk and Yhwh and demonstrates that they have many similarities. Both are universal king and creator but whereas Marduk in the Enuma

Elish is also a warrior, Yhwh's function in that regard is downplayed in the Enthronement psalms. Flynn then considers what is known about Neo-Assyrian imperialism and its policy concerning religion. Recent archaeological and textual evidence is marshalled to show the importation of Assyrian cultic features into its provinces and biblical passages are explored that hint at this. Judah was no match for Assyria in a military sense, thus Flynn argues that Judah's response was to downplay the warrior tradition and emphasise Yhwh as creator king who rules over all. In order to help substantiate the timing of this new emphasis, Flynn shows that First-Isaiah criticises Assyria's violence and also promotes Yhwh as a universal ruler. He does admit though that Yhwh as warrior does feature to some extent in First Isaiah in that he controls Assyria's dominance. Flynn concludes that Marduk was "a suitable prototype for YHWH's re-expression" (p. 171) but is less definite as to whether Cultural Translation actually took place. Chapter Six is merely a summary of the preceding chapters.

YHWH is King. The Development of Divine Kingship in Israel introduces a fresh view of the Kingship of Yahweh and Flynn has provided a service by drawing attention to the different ways that that is expressed in a variety of Biblical texts. The linking of Yhwh as universal king and creator to the period of Neo-Assyrian Imperialism, instead of the post-exilic period to which it is usually assigned, will provide a talking point amongst scholars. What should be questioned though is whether there really was a "development" in the notion of Yhwh's kingship or whether what are seen as the two "stages" simply reflect different streams of tradition that were incorporated into the thought of Ancient Israel and were highlighted subsequently, either at particular stages of its history or in the context of particular cultic situations. In Third-Isaiah, for instance, who is thought to postdate First-Isaiah by several centuries, the imagery of Yhwh as warrior is strong (Isa 59:16-18; 63:1-6; 66:15-16). There are a number of typographical errors in the book which is disappointing in a Brill publication.

Profiling Jewish Literature in Antiquity is the result of a five year consultation between the four scholars whose names appear alongside the title. In addition, a number of others have advised on aspects of the project. As the title suggests, the book is concerned with ancient Jewish Literature, but more precisely with Jewish works that are complete or almost so, are anonymous and are not included within the canon of the Hebrew Bible. The works range in date from c.200 BCE to c.700 CE. and are included only if they "are 'literary' in the sense that they can be understood as interventions into the formation of cultural, religious, or hermeneutic positions within ancient Judaism." (p. 7) As such, many of the works appear in corpora that are already familiar i.e. the Apocrypha, Pseudepigrapha, Dead Sea Scrolls and Rabbinic Literature although those corpora and the present corpus are not co-terminus as the writings in the former do not all conform to the conditions for inclusion in the latter.

The project began because of the dissatisfaction of the collaborators with three aspects current in the study of ancient Jewish literary works: imprecision in applying a category or categories of "genre"; the discussion of literary traits of a Jewish text in too much isolation from other texts and speculation about an individual text's earlier development without first considering the text as a whole. The formulation of a framework for studying the literary aspects of ancient Jewish texts deals with these difficulties, for it makes very precise the features of particular texts; allows a text to be viewed within the same framework as other ancient Jewish texts, thus overcoming the separate boundaries imposed by the existing corpora and scholarly specialisation, and mandates that the present text be studied as a whole.

The framework in which texts are to be studied consists of an inventory of structurally important literary features. The inventory was compiled empirically through re-reading in their original language the ancient texts to be profiled and so its growth was gradual. According to Samely (p. 11) the number of points and sub-points in the inventory is c.560 and each text profiled usually has between 80 and 100 points accorded to it. These can be instructive for the scholar as can the absence of other points. The majority of individual profiles do not appear in the present work which merely provides a sample of four ancient texts (Jubilees, the Temple Scroll, the Mishnah and Genesis Rabbah); others appear on <http://literarydatabase.humanities.manchester.ac.uk> although the task of profiling all the works slated for inclusion is not yet complete. Each profile is prefaced with a bibliography featuring the Critical Editions, Translations and Selected Studies.

The bulk of *Profiling Jewish Literature in Antiquity* is devoted to the inventory of structurally important literary features. The inventory is divided into twelve sections whose points and sub-points are listed in Part II of the book. The names of the twelve sections lend themselves to the titles of the chapters in

Part III: 1. The self-presentation of the text; 2. The perspective of the governing voice; 3. Poetic or rhetorical-communication formation; 4. Narrative coherence or narrative aggregation; 5. Thematic coherence or thematic aggregation; 6. Lemmatic coherence or lemmatic aggregation; 7. Correspondences and wording overlap between texts; 8. characteristic small forms; 9. Characteristic small-scale coherence or aggregation for thematic discourse; 10. Compounds of juxtaposed part-texts; 11. Dominant contents; 12. Sampling of scholarly genre labels. In these chapters there is an explanation of the Sections and the points made in them with specific references to examples of them in particular ancient texts. These chapters are essential a) for understanding the titles of the Sections which, because they are couched in terms of modern linguistic and discourse analysis, are readily understood by European scholars but not as readily by the English speaking world b) for comprehending the profiles of individual works that can be consulted on the above mentioned database.

In a way, *Profiling Jewish Literature in Antiquity* is disturbing because of its continual breaking down of literary features into smaller and smaller points and sub-points and this is probably recognised by the collaborators themselves because they preface their book with a quotation from Genette (1980, 137) who says, “One may perhaps find, and quite rightly, that such a schematization does not account for the ‘beauty’ of this page; but such is not its purpose.” Certainly the benefits of the years of collaboration between the scholars involved in the project do begin to emerge in the chapters in Part III. For example, in Chapter/Section 7 which deals with Correspondences, it is pointed out that employing a figure such as Enoch “known from biblical third-person narrative as a first person governing voice amounts to a transposition of perspective...” (p. 262). As indicated on p. 263, the perspective is now human rather than implicitly divine although it may reveal the divine to some extent. On p. 263 the connection of this narrative stance to the Hebrew Bible is made where it is noted that it is the prophets who speak in the first person and so later pseudonymous texts employing the first person are modelling themselves on their mode of expression. In his Concluding Remarks, Alexander Samely highlights five historical contours and contrasts that became apparent to him through the profiling of works according to the Inventory: 1. Thematic aggregation in a non-narrative format appears in pre-Rabbinic and Rabbinic works and is particularly dominant in Rabbinic legal discourse. However, Rabbinic works drop headings and unifying verbal signals which may indicate an inward approach to text and an unspoken link to context. 2. The large-scale use of sequential explicit commentary is central in Rabbinic Judaism and in the *Talmudim*, unlike in the earlier *Pesharim* from the DSS, there is true hermeneutic engagement with the base text. 3. Whereas a narrative format was dominant in biblical and pre-rabbinic works, it disappears in Rabbinic texts with the exception of small units. 4. In extra-canonical narratives which retell biblical narratives there is a shift from the impersonal to the personal (further details about this feature are provided in the example outlined above). 5. Many texts in the corpus came about through hermeneutic engagement with the Biblical text without any adjustment of a historical horizon between reader and text.

As it is virtually certain that any future scholarly work on an ancient text that has been profiled will need to refer to what has been said about it, the current book will be required background reading for many scholars and is likely to become a classic.

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Hadi Ghantous, 2013, *The Elisha-Hazael Paradigm and the Kingdom of Israel*. Durham: Acumen. Pp. v + 213. ISBN 978-1-84465-739-1 (cloth).

This interesting, learned and intricately argued book could have benefitted from an overview indicating where the author would take us, his major contentions, and some definitions. This will not significantly lessen its value for scholars, but it may limit the circulation of this otherwise worthy book among well-educated generalists.

First, it has been published in the BibleWorld series, edited by Philip R. Davies and James G. Crossley. This series, open to post-modernist concepts, and trying to reach an educated audience with cutting-edge scholarship, was an appropriate choice. Ghantous is self-consciously writing biblical studies from within the Middle East. He is an ordained minister in the National Evangelical Synod of Syria and Lebanon and an instructor in the Near East School of Theology in Beirut (which boasts the best library for biblical studies which I saw in Lebanon). It is fitting, and — I think — it was his deliberate strategy to use modern academic methods of Western origin, and domesticate them in the Middle East. For this, Ghantous deserves credit. Indeed, he has, in my view, succeeded. Future students of Hazael, his world, the relevant biblical passages, and the biblical use of foreign rulers would benefit from studying this volume.

The book falls into a very short introduction, eleven chapters and a conclusion. First, Ghantous concisely describes how Hazael has been treated in recent Western scholarship. In chapter 2, he undertakes a discussion of historiography, especially as applied to biblical studies, and describes the High, Conventional and Low Chronologies, and the “Tigleth-Pileser principle” (the propagandist who distorts the truth, as opposed to creating a fresh fiction). That Ghantous should even ask what history illustrates how meticulous his approach is. But then, granted his agenda in writing the history of the king of Damascus from a local perspective, this is appropriate. Chapter 3 deals with the archaeological evidence touching on Hazael’s kingdom. The next chapter considers the corresponding epigraphic evidence. It features an intriguing treatment of the Tel Dan inscription, with the author’s own transliteration, translation and comments. He also surveys other pertinent epigraphy, such as that of the Zakkur and Melkart Steles, and the plaster fragments of Deir ‘Alla.

The inscriptions of Shalmaneser III are dealt with in chapter 5, most notably the Black Obelisk. Then Ghantous moves on to the inscriptions of Adad-Nirari III, and in chapter 7, the Eponym Chronicles. He then comments upon the Assyrian sources, carefully mining them for clues which can be used to provide another perspective on the biblical testimony. His conclusion as to what the extra-biblical sources teach us about Hazael is found in chapter 9. By now, we have been treated to a sound and somewhat satisfying picture of who Hazael was and his accomplishments, so far as the non-biblical evidence takes us. However, it must be said, that when I had reached this point, p. 113, I was still unsure where Ghantous would be heading. Nevertheless, if one is studying, for example, the Tel Dan inscription, one can turn to pp. 37–65, taking them in isolation.

Chapter 10 is headed “The Hazael Paradigm in the Books of Kings”. On p. 114 we are told that “Hazael’s empire is turned by the biblical writers into a crucial theological paradigm that dominates the books of Kings, Amos and Jonah.” This would have been a good place to have told us exactly what that paradigm was with the conciseness with which it appears on the front flyleaf of the book. Chapter 11 is about the said paradigm in the Book of the Twelve, specifically, as stated, Amos and Jonah.

As I have indicated, the lack of a definition by which the book takes its title was a little frustrating. The “paradigm” is confidently referred to at pp. 136–37, 141, 150, 156, 157, 159, 168 and 172. Most often, Ghantous simply avers: “... the Elisha-Hazael paradigm is at work here” (p. 141). But what exactly is it? The fly-leaf gives us to understand that it is where a foreign ruler is the “faithful agent of God who overcomes the King of Israel and the House of David and so fulfils the divine plan.” It is very interesting, but then, why not have made either chapter 1 or chapter 2 a discussion of this concept, considering Necho, Cyrus and others? The very point which Ghantous makes with so much erudition concerning Hazael would have come into clearer focus by some treatment of the relation between gentiles and the people of the covenant.

These are my main points of praise, and my chief critique: the book simply lacked a clear overall direction to unite the competently executed parts. But apart from the minor typographical errors (e.g. “two factors weighted in the balance” p. 63), there were some more significant mistakes; for example, Biran and Naveh did not opt for the “plural” as stated on p. 54, but rather for the dual (in the construct state) in their celebrated 1993 article on the Tel Dan inscription. This is a clear but unfortunate case of dittography.

More substantially, is it true to say that “the aim of history is no longer to find out what really happened, but to weight (sic) probabilities” (p. 12)? Is Ghantous saying that Elijah did not exist (e.g. at p. 131)? I would personally have a great deal of sympathy with this view, but Ghantous might have come out rather

than teasing us. It is not enough, I would suggest, to say that material was secondarily associated with Elijah (p. 166), or that the Elisha cycle was prior to the Elijah stories (p. 130), when he effectively suggests that the putative prophet was entirely fictional. Conversely, if there was an Elijah, what are the secure bases of our knowledge of him? I wonder if this oversight is perhaps even a virtue in the mind of someone for whom history no longer aims to uncover the factual past, and for whom “the book of Kings was neither Deuteronomistic nor history” (p. 122).

It would have been nice to have had a snapshot of what is known of Hazael and his kingdom, ideally somewhere early in the book, with an indication of where the controversies lay. Yet, it must be said that, all in all, this is a valuable book, even if a little more work would perhaps have produced a far more effective product. If Ghantous was determined to show that the history of Damascus could be written from a local perspective (note the extract from Twain opposite the frontispiece, depicting Hazael), he has succeeded.

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Shamir Yona, 2013, *The Many Faces of Repetition: Basic Patterns of Repetition in Construct-State Expressions in Biblical, Post-Biblical and Ancient Near Eastern Rhetoric*. Beer Sheva: Ben-Gurion University Press. Pp. 256. ISBN 978-965-536-125-4 [in Hebrew].

In the second chapter of the biblical book of Hosea, vv. 21-22, we read as follows:

And I will betroth you unto me for ever
And I will betroth you unto me in exchange for righteousness and justice and lovingkindness and mercy
And I will betroth you unto me in exchange for faithfulness
And you shall know the LORD.

In this formula, which is the functional equivalent of “With this ring I thee wed, with my body I thee worship, and with all my worldly goods I thee endow: In the name of the Father, and of the Son, and of the Holy Ghost. Amen,” in the nuptial ceremony of the Anglican Church, or “Behold, you are consecrated unto me with this ring according to the Law of Moses and Israel,” in the traditional Jewish wedding ceremony, God, as it were, becomes the bridegroom of the people of Israel, bestowing upon them not an object of value but rather the five essential virtues, which will keep the people of Israel faithful to the God of Israel and, in the words of the declaration of consent in the Anglican Book of Common Prayer (1549) nuptial ceremony, “forsaking all others.” In the fourth and final line of the formula of betrothal found in Hosea 2:21-22 (such is the numbering in the standard Hebrew text; English Bibles number these verses as 19-20), God asks that the People of Israel, personified as the bride of God and addressed throughout the formula in the second person feminine singular, agree to be in an intimate relationship with the God of Israel, a relationship which is expressed by adherence to the Ten Commandments.

Not surprisingly, the standard critical commentary by William Rainey Harper, p. 242, seeks to remove the words “in righteousness and justice” as a later addition because, in Harper’s view, the words in question “are inapplicable . . . to the figure of betrothal;¹ present, as they stand, a bizarre arrangement of thought; they interfere with a smooth strophic structure; and express the thought of a later period.” Nevertheless, Harper admits that the thrice-repeated statement of betrothal makes it both emphatic and solemn. In fact, what I have learned from studying Yona’s recently published *The Many Faces of Repetition* is that the betrothal formula employed, as it were, by God in Hosea 2:21-22 is a typical combination in ancient Hebrew poetry of two rhetorical devices: anaphora and climactic conclusion. The first of these devices is the threefold repetition

¹ Harper 1905, pp. 242–243.

of the identical opening word or phrase in successive lines of a poetic unit, in this case, “And I will betroth you unto me,” for the sake of emphasis. The climactic conclusion consists in the case at hand of the appearance, at the very end of the betrothal formula, of a clause which is characterised by a reversal of the order that we came to expect because of the anaphoric formula of subject-verb-object-adverb. In the climactic conclusion, the previous grammatical subject, “God,” becomes the direct object, and the previous grammatical direct object, “you” (feminine singular in Hebrew), becomes the direct object. The climactic conclusion tells us what the betrothing bridegroom asks in return from the betrothed bride: namely, her commitment to be intimate with God to the exclusion of all other gods to whom Israel had previously been enticed and attracted.

In Hosea 4:15 we have another instance where careful attention to anaphora, i.e., the repetition at the beginning of three or more lines of the same formula, makes clear the original intention of the prophet to declare, in a manner reminiscent of Amos and Isaiah, that people who are guilty of private or public immorality are not welcome at God’s sanctuaries. The literary unit reads as follows:

If you are inclined to engage in extra-marital affairs [the only case in the Bible where we have the masculine form of the common Hebrew word for a promiscuous or adulterous person],
DO NOT come to Gilgal
AND DO NOT ascend to Beth-aven
AND DO NOT swear “As the LORD lives.”

In this last unit the prophet is so confident that the anaphora, i.e., the repetition three times of the opening words (in Hebrew the negative particle followed by a verb in the imperfect tense, which is characterised by the first letter *ʔ*), will make it clear that he is emphasising the same idea — that persons who are morally depraved should stay away from church-going until they change their behavior for the better — that he dares to refer to Bethel, literally “House of God,” by the dysphemism Beth-aven, “House of Sin,” and to Beer Sheba, which means “Well of the Oath,” by saying not “AND DO NOT come to Beer Sheba,” but rather “DO NOT swear As the LORD lives.” The latter manner of referring to Beer Sheba alludes to Gen. 21:31 where the name of the city recalls an oath taken by Abraham and Abimelech at that place. Moreover, the reference to Gilgal, the reference to Bethel and the reference to Beer Sheba in the south of Israel, as three sanctuaries frequently visited by Israelites from the north during the period of the two kingdoms of Judah and Israel, cannot help but remind one of Amos 5:4-5, where we read as follows:

For thus says the LORD to the House of Israel: “Seek Me and live.
AND DO NOT seek Beth El
AND DO NOT go to Gilgal
AND DO NOT cross over to Beer Sheba. . . .”

Shamir Yona’s recent book enables one to get into the mind of the prophets of ancient Israel when they employ the rhetorical strategies of ancient Hebrew poetry, now decoded and explicated by Yona in *The Many Faces of Repetition*. This book enables one to understand better than ever before the poetics, which is to say, the subtle interplay between content and form, which makes the messages of the prophets of ancient Israel all the more poignant.

During the last 35 years I have had the good fortune of meeting Shamir Yona several times each week in the Department of Bible Archaeology and Ancient Near East at Ben-Gurion University of the Negev, where he was first an undergraduate student, later a teaching assistant, and most recently, chair of the department. Consequently, I am able regularly to knock on his office door to ask him if I have understood the structure of one or another passage in the Hebrew Bible, especially the prophets, the psalms, and the wisdom literature, which abound in poetry and poetic devices. Having been bitten by the bug, I begin to see biblical rhetoric everywhere; for example, in the use of anadiplosis (that is, concatenation) in advertising, where the deliberate repetition of a word or phrase at the end of one line and then the beginning of the next is used to foster a sense of unity in a poetic element within a larger composition, just as it was by biblical prophets, sages, or psalmists. A classic example of the rhetorical device in question in Hebrew Scripture is Isa. 41.6-7 where verse 6 ends with the expression “Be of good courage,” and verse 7 begins with the verb “He encouraged.”

In his introduction to *The Many Faces of Repetition*, Yona both explains the importance of repetition as a feature of the literatures of the ancient Near East and surveys the history of research concerning this phenomenon from the Middle Ages to the 21st century.

One of Yona's many important contributions to the study of parallelism in biblical poetry and prose is his drawing upon the widely neglected findings of medieval Jewish scholars, including Moses Ibn Ezra (b. Granada c. 1055–1060 CE; d. after 1138 CE), also known by his Arabic name, Abu Harun Musa bin Ya'acub Ibn Ezra. This poet and philosopher bequeathed a work called *Kitab al-Muḥaḍarah wal-Mudhakarah*, also known by the title of its Hebrew version, *Shirat Yisrael*, which means *The Poetry of Israel*. Inter alia, Moses Ibn Ezra pointed out that while classical poetry is generally distinguished by meter (and the same may be said of ancient Akkadian poetry, which employed trochaic meter just as Greek and Latin poetry employed dactylic hexameter and just as Shakespeare employed iambic pentameter) or rhyme, Hebrew poetry (and we may now add the Ugaritic poetry of the late Bronze Age rediscovered in the 20th century CE) is characterised by various kinds of repetition. If, in recent times, medieval Hebrew exegesis is widely considered, almost condescendingly, as “reception history” rather than as scholarship, Yona treats seriously the contributions of the Spanish Jewish Rabbi Moses Ibn Ezra, the medieval Italian Rabbi Judah Messer Leon (1420 to 1425 CE–ca. 1498 CE), and the modern Italian Rabbi Moses Haim Luzzatto (b. Padua 1770–d. Acre, Palestine 1746), the author of *Leshon Limmudim*, a study of the poetics of Hebrew poetry first published in Mantua in 1727. *Leshon Limmudim* delineated eight classes of repetition in biblical poetry, including concatenation and anaphora, both of which are discussed above. Judah Messer Leon's study of ancient Hebrew rhetoric, entitled *Nofet Zufim*, meaning *The Honeycomb's Flow*, was printed in the author's lifetime at Mantua in Italy by Abraham Conat in 1475. In fact, this important work on the poetics of biblical poetry was the only Hebrew book published in the author's lifetime in the 15th century CE. As pointed out by Yona (p. 22), it was Judah Messer Leon who first divided repetition in biblical poetry into four classes. The first of these classes is anaphora, without the recognition of which we could not begin to understand the significance both within the Book of Hosea and beyond it of the betrothal formula set forth in Hosea 2:21–22. Before moving on to discuss the history of research in European languages in modern times concerning repetition in biblical poetry and prose, Yona (p. 23) calls attention to the contributions of Shlomo Löwisohn (1789–1821) in his book *Melizas Jeschurun* (Vienna: Anton Schmid, 1816), where, Yona points out, he not only refines the delineation of parallelism in biblical poetry but also provides extensive discussion of the style and content of each of the examples from biblical poetry, also provided by Yona.

No less important than the survey of modern scholarship in European languages and of contemporary scholarship in both European languages and modern Hebrew is the in-depth discussion of the contributions of David Yellin (1864–1941), who founded with Eliezer Ben Yehuda what became the Hebrew Language Academy. Yona refers repeatedly to the contributions of Yellin's *Biblical Studies* (ed. E-Z Melamed; Jerusalem: Reuven Mass, 1983) [in Hebrew], and also to Yellin's *Selected Writings* (2 vols; Jerusalem: Committee for the Publication of the Writings of David Yellin, 1939) [in Hebrew].

Following an extensive survey of the history of the study of parallelism in biblical poetry and prose (pp. 22–29) and an equally important discussion of the work of scholars who treated many patterns of repetition as scribal errors (pp. 29–30), Yona lucidly explains (pp. 35–36) that the purpose of *The Many Faces of Repetition* is to achieve an in-depth understanding of the various kinds of repetition found in the different genres present in Hebrew Scripture and cognate literature, in order to properly understand the messages the biblical authors sought to convey, the correct reading of the biblical text, the intended structural and stylistic features of the text (with due consideration to textual criticism), and the subtleties of Biblical Hebrew (and the cognate languages with respect to cognate literatures). Yona further explains (p. 36) that repetition serves five principal literary functions in the Hebrew Bible: 1) emphasising key words; 2) creating a phonological, auditory connection between parts of a verse or parts of a larger literary unit; 3) creating cohesion in the lines of a literary unit; 4) delineating the borders of a literary unit; and 5) creating surprise by imparting only partial general information which will become fully clear only later by means of a specific construct-state expression.

Each of the six chapters of *The Many Faces of Repetition* discusses one of the six expanded forms of the basic pattern of repetition, in which either a word is followed by a phrase consisting of that word as part

of a construct genitive chain, or the word in a construct genitive chain is followed by the single word not in a construct genitive chain. The two simple patterns are exemplified, respectively, by Jer. 9:25 in which the prophet states, “For all the nations are **uncircumcised** and all the House of Israel are **uncircumcised of heart**” (for extensive discussion of the passage in question, see pp. 51–52) and Job 24:15, “The eyes of the adulterer watch for twilight, thinking, ‘No eye will see me then. He places a mask over his face’” (for extensive discussion of this text, see pp. 101–102). The six individual chapters deal with 1) nominal expanded repetition in biblical poetry [pp. 41–116]; 2) nominal expanded repetition in biblical prose [pp. 117–128]; 3) nominal expanded repetition in ancient Semitic literature outside of the Jewish Bible (Dead Sea Scrolls; Sirach; Akkadian literature; Ugaritic literature; the Phoenician coffin inscription of Eshmunazor II of Sidon [early fifth century BCE]) [pp. 129–144]; 4) nominal-verbal and verbal-nominal expanded repetition in biblical poetry [pp. 145–161]; 5) nominal-verbal and verbal-nominal expanded repetition in ancient Semitic literature outside of the Bible [pp. 161–165]; 6) double and triple use of the simple pattern in biblical prose and poetry and in ancient Semitic literature outside of the Bible, including pre-biblical Ugaritic literature and post-biblical Sirach. The six principal chapters of *The Many Faces of Repetition* are followed by two appendices. The first deals with the repetition of a word in two different forms (other than detached and construct forms, which are delineated and analysed in the six main chapters) such as “eye of one who sees me/your eyes” in Job 7:8; ‘oz//mā’ōz, i.e., “strength//fortress” in Ps. 28:8 where each of the two words employed in parallelism belongs to a different morphological class of nouns in the Semitic languages; singular//plural; singular//dual; plural/singular, etc. [pp. 177–192]. The second appendix deals with repetition of words with no morphological variation. Yona divides this large class of poetic parallelism into 14 distinct classes, which include an independent noun in one clause repeated as a construct in the following clause; an independent noun in one clause repeated as a genitive in a construct genitive chain in the following clause; and a noun appearing as a genitive in a construct genitive chain in the first of two clauses and reappearing as an independent noun in the following clause.

The book includes an exceedingly rich bibliography (pp. 206–239), which lists books and articles in Hebrew, English, French, and German relevant to the study of biblical poetics and poetics in general. It includes works which appeared from the Middle Ages down almost to the date of publication of *The Many Faces of Repetition* at the end of 2013. The book includes an excellent subject index, which the author prepared with the help of his doctoral student, Dr Hagit Taragan, now a teaching fellow at Ben-Gurion University of the Negev. The index begins with a list (pp. 240–245) of the various terms employed in Hebrew, from the Middle Ages until the post-modern era, for a variety of subtle stylistic, syntactic and rhetorical strategies of ancient Semitic literatures, as discussed in the text and footnotes of *The Many Faces of Repetition*. The book concludes with an index of biblical and other texts that are discussed in the text and footnotes, as well as of references to ancient Near Eastern texts, including the Aramaic Proverbs of Ahikar and the Egyptian Proverbs of Amenemope, Second Temple Hebrew literature, the New Testament, ancient Rabbinic literature, the New Testament, Eusebius the Bishop of Caesarea [260/26–339/340 CE] (see pp. 158, 170), and Moses Maimonides [1138–1204 CE] Code of Law or Mishneh Torah (see p. 136).

Prof Shamir Yona, the author of *The Many Faces of Repetition*, has made a name for himself throughout Israel as an exciting classroom teacher and outstanding lecturer to professional and lay audiences alike. The very high standard of the book reviewed here, and now presented to a wider audience, shows how a scholar who had the benefit of sitting at the feet of some of the greatest scholars of Hebrew Scripture and ancient Semitic languages and literatures — including Jonas Greenfield, Joseph Naveh, Shelomo Morag, Meir Paran, Hayim Tadmor, Shemaryahu Talmon, and Moshe Weinfeld, of blessed memory, and may they be distinguished for long life, Yitzhak Avishur, Steven Fassberg, Menahem Haran, Avi Hurvitz, Shalom Paul, Elisha Qimron, Alexander Rofé, and Daniel Sivan — has now himself shed abundant new light upon heretofore obscure texts in the Hebrew Bible and cognate literature. This reviewer looks forward to reading more and more of Shamir Yona’s published scholarship. Hopefully this book, which the Bialik Institute in Jerusalem currently gives away for less than the price of a business lunch at a Tel Aviv restaurant, will soon appear in an English version, so that Yona’s original and brilliant scholarship can reach a larger and more international audience. Along with the latest grammars and dictionaries of ancient Semitic languages, Yona’s *The Many Faces of Repetition* should be on the desk of every serious student and scholar of Hebrew

Bible and cognate literature. Furthermore, educated laypersons with a basic knowledge of Modern Hebrew will find that it contains answers to many of the questions they did not know whom to ask concerning how the Bible expresses its variety of meanings.

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